C7

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typedef int
                                                                                /* Structure to start every RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  %#include <restore/dispatch_daemon.h>
                                                                                                                                                          /*********************************
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #include
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      Fri Jan 04 14:40:00 2008
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                                                                                                                                       Data Structure Definitions
                                                                                                                                                                                                                                                  Typedef Definitions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* for sharing of STRING(x) and OPAQUE(x) */
                                                                                                                                                                                                                                                                                                                         Enum Definitions
                                                                                                                                                                                                                                                                                                                                                                                              Constant Definitions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     %** Copyright 1997,1998 EMC Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   * Basic idea here:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * Compile-Time Options:

This acutally gets run through RPCGEN not compiled.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               * Primary Data Acted On: This defines the data that will flow over the wire.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                * restore_engine.x :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mission Statement:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ie restore_engine.h in this case. Thi more sense and be properly documented.
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                                                             struct RE_rpc_objID
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                         unsigned long
                                                                                                                                                                                         RE_errno_ty;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EDM Restore Engine C/S communication module
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Define the RPC level interfaces to the Restore Engine and all data types that will be passed via RPC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     functions. This defines the RPC level calls that a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This is an RPCGEN file which defines the RPC interface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "caller" can make and the "service" will respond to.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the EDM server) and the backup client callers of its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           between the Restore Engine server (which resides on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           header, the -m flag to create the service side
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        marshalling routines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          routines, and the -c flag to create the common data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          routines, the -1 flag to create the client side
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               must be run through with the -h flag to create a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The RPC mechanism will take care of data
                                                                                request and response -
   /ccs_restore/restore_engine.x 1
                           rpc_type;
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                                                                              for debug purposes */
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            marshalling
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                                                             struct AnswerList {
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/* creation time */
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (ie, rpc #) */
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/* structures for input and output of submit RPCs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* structure for GetHostPlatformType results */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* structure for single character string argument
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* structures for input and output of get_source_hosts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* structures for input and output of re_initialize rpc call:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   * get_destination_hosts rpc calls:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 3 of 172
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    RE_rpc_objID
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                                        status;
                                                          RPCobjID;
                       submitObjectID;
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Page 4 of 172
                                                                                                                                                                                                                                                                             /* structures for input and output of get_top_level_objects RPC
                                                                                                                                                                                                                                                                                                                                                                                                     /* structure for input of set_user_answer RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* structure for output of get_question RPC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* structures
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    RE_rpc_objID RPCobjID
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                                                                                                                                           startDirectory<256>; /* Dir to start searching */
                                                                                                           searchString<128>;
    group<64>;
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                                                                                       /* Flag to include or exclude */
                   /* Flag to exclude owner */
                                                     /* Types of files to search for */
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/* Specific group of files */
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                                                                                                                                                                                                                                                                                        linked list */
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    /* structures for input
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* structures for input and output of mark_object RPC's:
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RE_rpc_objID RPCobj
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    and output of unmark_object RPC's:
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/ccs_restore/restore_engine.x 6

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/ccs_restore/restore_engine.x 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RPCobjID;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     backupTime;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RPCobjID;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RPCobjID;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              catType<>;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            numrec<>;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      level<>;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_get_top_level_templates_args ) =
                                                                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
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Page 9 of 172
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••
Fri Jan 04 14:40:00 2008
                              /* rpc for EDMRST_IsThereNextBackupForTime */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_boolean_result
                                                                                                                                                              /* rpc for EDMRST_IsTherePrevBackupForTime */
                                                                                                                                                                                                                                                                         /* rpc for EDMRST_IsThereNextBackup */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* rpc for EDMRST_GetCurrentBackupTime */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_get_current_template_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* rpc for EDMRST_GetCurrentTemplate */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RE_get_marked_total_size_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_get_unmark_results_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE_mark_object_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_get_mark_results_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* rpc for EDMRST_GetAllBackupTimes */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* rpc for EDMRST_GetMarkedTotalSize */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RE_mark_object_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_get_find_results_result
                                                                                                                                       RE_boolean_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_get_all_backup_times_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* rpc's for EDMRST_UnmarkObject */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* rpc's for EDMRST_MarkObject */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_find_restorable_objects_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_get_restorable_objects_output_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_get_restorable_objects_start_result
                                                                                                                                                                                                                                               RE_boolean_result
                                                                                                                                                                                                                                                                                                                                                           RE_boolean_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RE_get_current_backup_time_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* rpc's for EDMRST_GetRestorableObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* rpc for EDMRST_DoesAlternateExist
                                                                                                                                                                                                                                                                                                                                                                                  rpc for EDMRST_IsTherePrevBackup */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpc's for EDMRST_FindRestorableObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpc for EDMRST_Finish
                                                                                                           re_is_there_prev_backup_for_time(
                                                                                                                                                                                                                   re_is_there_next_backup( RE_set_backup_time_args ) =
                                                                                                                                                                                                                                                                                                                            re_is_there_prev_backup( RE_set_backup_time_args )
                                                                                                                                                                                                                                                                                                                                                                                                                                     re_get_all_backup_times( RE_get_all_backup_times_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              re_get_current_backup_time( RE_null_args )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    re_get_current_template( RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_get_marked_total_size( RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       re_unmark_object( RE_unmark_object_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      re_get_unmark_results( RE_get_mark_results_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     re_mark_object( RE_mark_object_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            re_get_find_results( RE_get_find_results_args ) = 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              re_get_mark_results( RE_get_mark_results_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           re_find_restorable_objects(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_get_restorable_objects_output
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_get_restorable_objects_start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                re_does_alternate_exist( RE_does_alternate_exist_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_finish( RE_null_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                re_set_user_answer( RE_set_user_answer_args ) =
/ccs_restore/restore_engine.x 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_find_restorable_objects_args ) = 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_get_restorable_objects_output_args ) = 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RE_get_restorable_objects_start_args ) =
                                                                                 RE_backup_for_time_args) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19
Page 10 of 172
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                                                                                                                                                                                                                                                                                                                               25;
                                                                                   27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                       24;
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/* rpc for EDMRST_GetAllTopLevelObjects */
RE_get_top_level_objects_result
                                                                                                                                                                                                                                                                                                                                                                                                                                /* rpc for EDMRST
RE_boolean_result
                                                                                                                RE_catalog_info
                                                                                                                                                                                                                        RE_status_result
                                                                                                                                                                                                                                                                                                                               RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RE_boolean_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RE_get_host_platform_type_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_get_hosts_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* rpc for EDMRST_IsObjectMarked */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* rpc for EDMRST_IsObjectMarkable */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* rpc for EDMRST_GetNecessaryMedia */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* rpc for EDMRST_SetMostRecentBackup */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* rpc for EDMRST_SetNextBackup */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* rpc for EDMRST_SetFirstBackup */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* rpc for EDMRST_SetPrevBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* rpc for EDMRST_SetBackupForTime */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RE_is_object_marked_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_is_object_markable_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_get_necessary_media_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_status_result
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RE_boolean_result
                                                                                                                                   rpc for RSTSL_get_backup_level
                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpc for EDMRST_GetBackupTimesSupport */
                                                                                                                                                                                                                                                  rpc for EDMRST_poll_Load_recx_directives
                                                                                                                                                                                                                                                                                                                                                       rpc for EDMRE_Load_recx_directives*/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpc for EDMRST_IsObjectSearchable */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc for EDMRST_GetHostPlatformType */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpc for EDMRST_GetDestinationHosts */
                                                                                                                                                                                         re_poll_load_recx_directives(RE_null_args) = 42;
                                                                                                                                                                                                                                                                                                      re_load_recx_directives( RE_recx_file_info ) =
                                                                                                                                                                                                                                                                                                                                                                                                           re_get_backup_times_support( RE_tlo_query_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   re_get_host_platform_type( RE_string_args )
                                                                                  re_get_catalog_info(RE_time) = 43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              re_is_object_searchable( RE_tlo_query_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               re_get_destination_hosts( RE_get_hosts_args ) = 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           re_is_object_marked( RE_is_object_marked_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   re_is_object_markable( RE_is_object_markable_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_get_necessary_media( RE_get_necessary_media_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_set_most_recent_backup( RE_set_backup_time_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      re_set_next_backup( RE_set_backup_time_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               re_set_prev_backup( RE_set_backup_time_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                re_set_backup_for_time( RE_backup_for_time_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   re_set_first_backup( RE_set_backup_time_args ) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          re_is_there_next_backup_for_time(
RE_backup_for_time_args) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38;
                                                                                                                                                                                                                                                                                                          41;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35;
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% * to register would be contacted when RPC's come
                                                      identifies this
                                                                                                  This number cannot
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                                                                                                                                                                                          /* This is version 1 */
                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                  /* rpc for EDMRST_GetSymmRestoreOption */
RE_boolean_result
                                                                                                                                                                                                                                                                                  RE_status_result
                                                                                                                                          RPC program number.
                                                                                                                                                                                                                                                                                                      rpc for EDMRST_Ping */
                                                                                                                                                                                                                                                        re_ping( RE_null_args ) =
                                                                                                                                                                                                                                                                                                                                              re_get_symm_restore_option( RE_tlo_query_args ) = 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  re_get_all_top_level_objects(
                                                      daemon uniquely.
                                                                                                  be re-used by
                                                                                                  These are reserved in /pds/docs/RPC_numbers by any other RPC daemon on the machine,
                                                        If it were to be re-used,
                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_get_top_level_objects_args ) = 44;
                                                                                                                                                                                                                                                              46;
          in for this number
                                  the last daemon
                                                                                  as it
```

./ccs_restore/restore_engine.x 12

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/*
* Local Constants:
                                                                                                                                                                                                                                                                                     void
                                                                                               /* This constant is designed to allow an asynchronous RPC to complete after
* an interrupt signal is sent, but not allow the canceling RPC to time out
#define MAX_CANCEL_WAIT_SECS 20
                                                                                                                                                                                                                                                                   void
                           Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                 #include <sys/time.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #include
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #include
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #include
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #include
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #include <esl/c_portable.h>
#include <esl/inout.h>
#include <util/esl_string.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #include
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                                                                                                                                                                                                                                                                                                                                                     * External prototypes that are defined locally because of header file * conflicts between restore_engine.h and restoreRPC.h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             #define RAW_NETWORK 0
#define PLUGIN 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       static char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #if !defined(lint)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #endif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Basic idea here:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Compile-Time Options:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Primary Data Acted On:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mission Statement:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRestoreEngService.c
                                                                                                                                                                                                                                                             RSTLL_FreeTimelist( struct RSTRPC_time_list **listhead RSTLL_FreeNameList( struct RSTRPC_name_list **listhead
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Copyright 1996,1997 EMC Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <EDMRestoreEngLog.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <EDMRENotifyApi.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <EDMREQuestionApi.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <restore/EDMREProgressApi.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <EDMRECommandApi.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <RSLapi.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <restore/REprogmsg.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <restore/restore_engine.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <restore/csc_EDMRestoreEng.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <eerrno/e_eb.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <logging/logging.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <csc/cscomm.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RCS_id [] =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RPC
 ../pgms_restore/EDMRestoreEngService.c 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry points
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "@(#)$RCSfile: rpcsvc.c,v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "$Date: 1997/02/06 20:49:15
                                                                                                                                                                                                                                                             Page 13 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 13 of 172
                                                                                                                         *
 Fri Jan 04 14:40:00 2008
                               ** Outputs:
                                                                                                                                                                       /***********
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_initialize_1_svc(IN RE_initialize_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               static
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           static RE_errno_ty check_RPC_state( |
static void clear_RPC_state( void );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               static void set_rpc_obj( ulong rpc_id, RE_rpc_objID *rpc_objID );
static RE_errno_ty check_RPC_state( boolean_ty set, int cmd );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ** Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #define MAX_CANCEL_RESTORE_WAIT_SECS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           * Local static data:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       * Local functions:
                                                                           Inputs:
                                                                                                                         Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     * does not take effect immediately.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inputs:
                                                                                                                                                                                                                                                                                                                                                                             else
                                                                                                                                                                                                                                     return &argzz;
                                                                                                                                                                                                                                                                                 set_rpc_obj( re_initialize, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       if ( (argzz.status = check_RPC_state( FALSE, COMMAND_NONE_ACTIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if (argzz.status == E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   static RE_status_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /st allow multiple calls to Initialize while debugging st/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ! = E_SUCCESS)
                                 None
                                                                                                                     re_get_source_hosts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Function to create a restore session
                                                                         RE_get_hosts_args * -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_initialize_result * - result of init function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RE_initialize_args * -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     re_initialize__svc_1
                                                                                                                                                                                                                                                                                                                             setGlobalStatus( EDMRE_STATE_FAILED );  /* \ without \ init, \ we're \ dead 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz.status = RSTSL_Initialize( arg->username);
                                                                                                                                                                                                                                                                                                                                                                                                                       clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     setGlobalStatus( EDMRE_STATE_BROWSING );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             current_rpc_cmd = COMMAND_NONE_ACTIVE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* if not idle, trouble */
/* we weren't idle, reject call */
../pgms_restore/EDMRestoreEngService.c 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* note time of last RPC */
                                                                         args for the get source hosts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _initialize_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for the restore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IN struct svc_req *req
                                                                                                                                                                                                                                                                                                                                                                                                                                               /* after init is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         initialize call
                                                                           call
 Page 14 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                               browsing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 14 of 172
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RE_get_hosts_result
                 re_get_destination_hosts_1_svc
                                                                             re_get_source_hosts_1_svc( IN RE_get_hosts_args *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_get_hosts_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ** Intended caller: RPC call from Restore API client
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ** Return Codes:

** RE_get_hosts_result * -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Page 15 of 172
                                                                                                                                        Purpose:
                                                                                                                                                                                   Return
                                                                                                                                                                                                               Outputs:
                                                                                                                                                                                                                                            Inputs:
                                                                                                                                                                                                                                                                        Routine:
                                                                                                                                                                                                                                                                                                                                                                           set_rpc_obj( re_get_source_hosts, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             argzz.hosts = NULL;
                                                                                                                                                                   Codes:
RE_get_hosts_result * -
                                                                                                                                                                                                                                                                                                                                                                                                                        if (argzz.status ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      argzz.numEntries = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   argzz.cookie = arg->cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 static RE_get_hosts_result argzz;
static RSTRPC_name_list *
                                                                                                                                                                                                                                            RE_get_hosts_args
                                                                                                                                      Function
                                                                                                                                                                                                               None
                                                                                                                                                                                                                                                                         re_get_destination_hosts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Function
                                                                                                                                                                                                                                                                                                                                                                                                            argzz.hosts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz.status = RSTSL_GetSourceHosts( arg->hostname.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RSTLL_FreeNameList( &hosts );
                                                                                                                                        to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              to retrieve the backup client hosts
                                                                                                                                        retrive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 re_get_source_hosts_1_svc
IN RE_get_hosts_args *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                        E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                             = hosts;
                                                                                                                                        the
                                                                                                                                                                                                                                               ı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* note time of
                                                                                                                                                                                                                                            args
                                                                                                                                        names
                                                                                                                                                                   result of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  result of
                                                                                                                                                                                                                                            for the RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *hosts = NULL;
                                                                                                                                        0£
                                                                                                                                      the
                                                                                                                                                                     RPC function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                get source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      last RPC
                                                                                                                                      possible
                                                                                                                                                                                                                                            call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        free old namelist
  IN struct
                                                                                                                                                                                                                                                                                                                                                                                                                                                       &argzz.cookie );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      &argzz.numEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       &hosts,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    arg->maxEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IN struct svc_req
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hosts
                                                                                                                                      restore target
                                                                                                                                                                     call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fri Jan 04 14:40:00 2008
  svc_req *req
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *req
                                                                                                                         hosts
                                                                                                                                                                           *
                                                                                                                                                                                                                                                                ** Purpose:
                                                                                                                                                                                                                                                                                                                                                      *
                                                                                                                                                                                                                                                                                                                                                                   *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 16 of 172
                                                                                                                                                                                                                                                                                                                                                                 Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                               Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                           Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Routine:
                                                                         setLastRpcTime();
                                                                                                       RSTRPC_top_level_obj
                                               Ť
                                                                                                                        RSTRPC_tlo_list
                                                                                                                                      static short lastNumEntries
                                                                                                                                                      static RE_get_top_level_objects_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                set_rpc_obj( re_get_destination_hosts,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   else {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if ( (argzz.status = check_RPC_state( FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             argzz.hosts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            argzz.numEntries = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          argzz.cookie = arg->cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   setLastRpcTime();
if (hosts)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .<u>.</u>
                                              (lastNumEntries)
                                                           free last call's output:
                                                                                                                                                                                                                                                                                                                      Function to retrive the top level objects
                                                                                                                                                                                                                                                                                                                                                                                                None
                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_get_top_level_objects_args *
                                                                                                                                                                                                                                                                                                                                                  RE_get_top_level_objects_result * - result of function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_get_top_level_objects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E_SUCCESS)
                              xdr_free( xdr_RE_get_top_level_objects_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ξ£
  lastNumEntries =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RSTLL_FreeNameList( &hosts );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    re_get_destination_hosts_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            argzz.hosts =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   we
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           == argzz.status)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  weren't
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RSTSL_GetDestinationHosts( arg->maxEntries,
                                                                                                          *tloPtr;
                                                            /* note time
  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* if not idle, trouble */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* note time of
                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   idle,
                                                                                                                         *topListPtr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   leave hosts=NULL; reject call */
                                                                            of
                                                                                                                                                                                                                                                                                                                                                                                                                                              args for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  &argzz.RPCobjID
                                                                             last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       free old namelist
                                                                            RPC
                                                                                                                                                                                                                                                                                                          workitem,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     &argzz.numEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           &argzz.cookie );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         khosts,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
                                                                                                                                                                                                                                                                                                                                                                                                                                               ďoż
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fri Jan 04 14:40:00 2008
                   char *)&argzz);
                                                                                                                                                                                                                                                                                                          workitem
                                                                                                                                                                                                                                                                                                                                                                                                                                                 level objs
                                                                                                                                                                                                   *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                             sets)
                                                                                                                                                                                                                                                                                                                                                                                                                                    call
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static RE_get_hosts_result argzz; static RSTRPC_name_list *

../pgms_restore/EDMRestoreEngService.c 3

*hosts = NULL;

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argzz.cookie = arg->cookie;

../pgms_restore/EDMRestoreEngService.c 4

```
** Outputs:
                                                                                 re_get_all_top_level_objects_1_svc( IN
                                                                                                            RE_get_top_level_objects_result *
                                                                                                                                                                                         ************
                                                                                                                                                                                                      ** Intended caller:
                                                                                                                                                                                                                                                                         ** Purpose:
                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                          ** Return
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /**********
          Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #endif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* Fix returned objects to avoid null string pointers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  set_rpc_obj( re_get_top_level_objects, &argzz.RPCobjID
                                                                                                                                                                                                                                                                                                                                            Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* this might cause problem: 0 length, 1 char buffer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    while (topListPtr)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             topListPtr = argzz.topLevelObjs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lastNumEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      argzz.topLevelObjs = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          argzz.numEntries =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11
                                                                                                                                                                                                                                                                           Function
                                                                                                                                                                                                                                                                                                                                                                                           None
                                                                                                                                                                                                                                                                                                                RE\_get\_top\_level\_objects\_result * - result of function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_get_top_level_objects_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_get_all_top_level_objects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (argzz.status = check_RPC_state( FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    topListPtr = topListPtr->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     if (!tloPtr->appData.appData_val)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ħ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if (!tloPtr->wiBIC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if (!tloPtr->root.objName)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tloPtr = topListPtr->tlo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       if (!tloPtr->fileSpec)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (!tloPtr->root.objTypeString)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status = RSTSL_GetTopLevelObjects( arg->sourceHost,
                                                                                                                                                                                 (!tloPtr->hostname)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (!tloPtr->templateName)
                                                                                                                                                                                                        Internal Only.
                                                                                                                                                                                                                                                                           to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  н
                                                                                                                                                                                                                                                                         retrive the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tloPtr->appData.appData_val = esl_strdup( ""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tloPtr->wiBIC = esl_strdup( "" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tloPtr->templateName = esl_strdup( ""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tloPtr->fileSpec = esl_strdup( "" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tloPtr->root.objTypeString = esl_strdup( ""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tloPtr->root.objName = esl_strdup( ""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tloPtr->hostname = esl_strdup( ""
    ../pgms_restore/EDMRestoreEngService.c 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                argzz.numEntries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        We
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                         IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  weren't idle, leave hosts=NULL; reject call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_get_top_level_objects_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* if not idle, trouble */
                                                                                                                                                                                                                                                                     top
                                                                             RE_get_top_level_objects_args *arg,
                                                                                                                                                                                                                                                                     level objects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1
                                                                                                                                                                                                                                                                                                                                                                                                                                                          args
                                                                                                                                                                                                                                                                                                                                                                                                                                                             for the
                                                                                                                                                                                                                                              workitem,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for RPC :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLUGIN);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             &argzz.cookie,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      &argzz.numEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            &argzz.topLevelObjs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                arg->maxEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                        top level objs
                                                                                                                                                                                                                                                workitem sets)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *
      Page 17 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 17 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                  call
                                                       ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                            #endif
    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                      <u>/*******************</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #if 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* Fix returned objects to avoid null string pointers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fri Jan 04 14:40:00 2008
                                                                                                      Inputs:
                                                                                                                                                       Routine:
                                                                                                                                                                                                                                                                   return &argzz;
                                                                                                                                                                                                                                                                                                                set_rpc_obj( re_get_top_level_objects, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      while (topListPtr)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          topListPtr = argzz.topLevelObjs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      if (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz.topLevelObjs = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          argzz.numEntries =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          argzz.cookie = arg->cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       static RE_get_top_level_objects_result argzz;
static short lastNumEntries = 0;
RSTRPC_tlo_list *topListPtr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lastNumEntries =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     if (lastNumEntries)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RSTRPC_top_level_obj
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ...
II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   this
                                                           None
                                                                                                                                                  re_get_restorable_objects_start
                                                                                                    RE_get_restorable_objects_start_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           free last call's output: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (argzz.status = check_RPC_state( FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               might cause problem: 0 length,
                                                                                                                                                                                                                                                                                                                                                                                                                                                      if (!tloPtr->appData.appData_val)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     if (!tloPtr->fileSpec)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (!tloPtr->root.objName)
                                                                                                                                                                                                                                                                                                                                                                                   topListPtr = topListPtr->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if (!tloPtr->wiBIC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if (!tloPtr->hostname)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (!tloPtr->templateName)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (!tloPtr->root.objTypeString)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tloPtr = topListPtr->tlo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           argzz.status = RSTSL_GetTopLevelObjects( arg->sourceHost,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              xdr_free( xdr_RE_get_top_level_objects_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lastNumEntries =
                                                                                                                                                                                                                                                                                                                                                                                                                                  tloPtr->appData.appData_val = esl_strdup( ""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tloPtr->wiBIC = esl_strdup( "" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tloPtr->hostname = esl_strdup( "" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tloPtr->templateName = esl_strdup( ""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tloPtr->fileSpec = esl_strdup( "" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tloPtr->root.objTypeString = esl_strdup( ""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tloPtr->root.objName = esl_strdup( ""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                argzz.numEntries;
../pgms_restore/EDMRestoreEngService.c 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       we weren't idle, leave hosts=NULL; reject call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   re_get_all_top_level_objects_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* if not idle, trouble */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *tloPtr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 char buffer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for RPC :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RAW_NETWORK);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 &argzz.cookie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       &argzz.numEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                &argzz.topLevelObjs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        arg->maxEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      char *)&argzz);
Page 18 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 18 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>`</u>;
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if (cmd_args->parentObj->objLevel == RSTRPC_tlo_type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   re_get_restorable_objects_start_1_svc(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_get_restorable_objects_start_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 19 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* make
else if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     setLastRpcTime();
cmd_args = calloc(1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       int
                                                                                                                                                                                                                                                                                                                                                                                                                                               cmd_args->parentObj->RE_restorable_obj_u.tloInfo->templateName =
                                                                                                                                                                                                                                                                                                                                                                                                                                                               free( cmd_args->parentObj->RE_restorable_obj_u.tloInfo->templateName);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     if (NULL == cmd_args)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   static RE_get_restorable_objects_start_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and whether or not to include bad files.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        se: Function to start the retrieval of the child objects of the specified parent object. The caller specifies the parent object
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_get_restorable_objects_start_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_get_restorable_objects_start_result *
                                                                                                                        else
                                                                                                                                                                                                                                                                                                                                             cmd_args->allowBadFiles = arg->allowBadFiles;
                                                                                                                                                                                                                                                                                                                                                                 cmd_args->maxEntries = arg->maxEntries;
                                                                                                                                                                                                                                                                                                                                                                                    cmd_args->cookie =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (E_SUCCESS !=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sure no RPC is in progress */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       status;
                                                                                                                                                                                                                                                                                                      if (PushRpcInput( (void *)cmd_args, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                        arg->parentObj = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cmd_args->parentObj = arg->parentObj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRestoreEng_logent( __FILE__, __LINE__, LOG_E
MESSAGE_NO_MEMORY, errno,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* change null string template name to NULL ptr */
                                                        log
                                                                                                                          H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_get_restorable_objects_start_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Cannot malloc RE_get_restorable_objects_start_args" );
                                                          error, clean up input queue,
                                                                                                                                                             EDMRestoreEng_logent(
                                                                                                                                                                                                                                           EDMRestoreEng_logent(
                                                                                                                                                                                                                                                             /* log error,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* note time of last RPC */
sizeof(RE_get_restorable_objects_start_args) );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (argzz.status = check_RPC_state( TRUE, COMMAND_GET_RESTORABLE_OBJECTS )) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IN RE_get_restorable_objects_start_args
                                                                                                                                                                                                                                                                                                                                                                                      arg->cookie;
                                                                                                   COMMAND_GET_RESTORABLE_OBJECTS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IN struct svc_req
                                                                                                                                                                                                                                                               return error
                                                                                                                                                                                                                    status,
                                     __FILE___
                 status, 0,
                                                                                                                                                                                                                                               FILE
                                                                                                                                                               indicate idle
                                                          return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *req )
                                                                                                                                                                                                                          0
                                                                                                                                                                                                    "PushRpcInput failed");
"PushCommand failed");
                                 __LINE__, LOG_ERR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *cmd_args;
                                                                                                                                                                                                                                             LINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOG_ERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fri Jan 04 14:40:00 2008
                                                                                                                                                               20
                                                                                                                                                                                                                                             LOG_ERR,
                                                                                                     &status)
                                                                                                                                                             fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RE_get_restorable_objects_output_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           re_get_restorable_objects_output_1_svc(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 20 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Routine:
                                                                                                                     else
                                                                                                                                                                                                                                                                                                                           setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                        static
                                                                                                                                                                                                                                                                                                                                                                                                         static RE_get_restorable_objects_output_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of
                                                                                                                                                                                                                                                                                                        if (outarg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     set_rpc_obj( re_get_restorable_objects_start,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   £ ±
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _get_restorable_objects_start_1 RPC call, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     its output.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Function to test for completion of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (argzz.status != E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          re_get_restorable_objects_output
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_get_restorable_objects_output_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_get_restorable_objects_output_result
                                                                                                                                                                                                                                                                                                                                                                                    RE_get_restorable_objects_output_result
                                        argzz.childrenObjs =
                                                                                                                                                                                                                                                               xdr_free( xdr_RE_get_restorable_objects_output_result,
                                                                                                                                                                                                                                                                                                                                                                    result, cmd, status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 }
else
                                                                                                                      /* init static output
                                                                                                                                                                                                                        free( outarg );
                                                                                                                                                                                                                                                                                      /* free last results */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             if (cmd_args) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* failure somewhere:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               re_get_restorable_objects_start_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   free( cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          xdr_free( xdr_RE_get_restorable_objects_start_args,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               argzz.status = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PopRpcInput( (void **)&cmd_args, &status);
argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                      NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         clear_RPC_state( );
                                                                                                                                                                                                                                           (char *)outarg
                                                                                                                                                                                                                                                                                                                               /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                  IN struct svc_req
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IN RE_get_restorable_objects_output_args *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (char *)cmd_args);
                                        NULL;
                                                                                                                        struct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   free allocated
                                                                                                                        for errors (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* indicate idle on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   memeory:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        &argzz.RPCobjID
                                                                                                      1st
                                                                                                                                                                                                                                                                                                                                                                                         *outarg
                                                                                                                                                                                                                                                                                                                                                                                                             argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           retrieve some or all
                                                                                                      time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                             11
                                                                                                      & aft errs
                                                                                                                                                                                                                                                                                                                                                                                           NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fatals */
                                                                                                        *
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    make sure this RPC is in progress */
                            re_get_restorable_objects_output_1_svc
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RE_mark_object_result
                               re_mark_object_1_svc
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*
                                                                                                                             *
** Outputs:
                                                                                            ** Routine:
                                                                                                                                                     /********
                                               Inputs:
                                                                                                                                                                                                                                                                                                              /* return static result struct on errors */
set_rpc_obj( re_get_restorable_objects_output, &argzz.RPCobjID
if (argzz.status == EP_RB_RECOVER_SERVERFAIL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            else
                                                                                                                                                                                                                                             return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          else if (result != COMMAND_RESULT_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      else if (cmd != COMMAND_GET_RESTORABLE_OBJECTS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* test for completion of processing: later use real flag */ else if (PopResult( -1, &result, &cmd, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RE_mark_object_args
                                                                                               re_mark_object
                                                                                                                                                                                                                                                                                             clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                            return outarg;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   set_rpc_obj( re_get_restorable_objects_output, &outarg->RPCobjID);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 if (PopRpcOutput( (void **)&outarg, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDMRestoreEng_logent( __FILE__, __LINE__,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* return popped results struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDMRestoreEng_logent( __
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* log error, clean up, return error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           if (status == COMMAND_RECORD_GET_FAILED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "PopResult mismatch: got %d command, expected %d\n", cmd, COMMAND_GET_RESTORABLE_OBJECTS);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* log error, clean up, return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MESSAGE_FAILURE_DOING_ASYNC_RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "RPC failure in process manager thread" );
                                                                                                                                                                                                                                                                 /* indicate process mgr idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  __FILE__,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE__, __LINE__, LOG_ERF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0, "PopRpcOutput failure");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* indicate process mgr idle */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LINE_,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOG_ERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOG_ERR, status,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_mark_object_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  int
                                           else
```

** Return Codes: Fri Jan 04 14:40:00 2008

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```
re_mark_object_1_svc( IN RE_mark_object_args *arg, IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Intended caller: RPC call from Restore API client
if (argzz.status != E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* make sure no rpc is in progress */
else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_mark_object_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if (NULL == cmd_args)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cmd_args = calloc( 1, sizeof(RE_mark_object_args) );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              static RE_mark_object_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                se: Function to start the marking process for object and, optionally, for its descendants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ! = E_SUCCESS
                                                                                                                                                                                                                                                                   /* log error, clean up input queue, return error
EDMRestoreEng_logent( __FILE__, __LINE__,
status, 0,
                                                                                                                                                                                                                                                                                                                                                                             else if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       if (PushRpcInput( (void *)cmd_args, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cmd_args->allowBadFiles = arg->allowBadFiles;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cmd_args->backupTime =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           arg->thisObj = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ClearRpcCancelFlag( );
ClearProgressValue( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Cannot malloc RE_mark_object_args" ); argzz.status = EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRestoreEng_logent( __FILE__, __LINE__, LOG_E MESSAGE_NO_MEMORY, errno,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cmd_args->descend = arg->descend;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cmd_args->thisObj = arg->thisObj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 status;
                                                                                                                                                                                                                                                                                                                                                                             (PushCommand( COMMAND_MARK_OBJECT, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                argzz.status = EP_RB_RECOVER_SERVERFAIL;
clear_RPC_state();  /* indicate idle on fatals
                                                                                                                                                                                         argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status = E_SUCCESS,
                                                                                                                                                                 clear_RPC_state( );
                                                                                                                                                                                                                  PopRpcInput( (void **)&cmd_args, &status);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* just return failure status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* reset cancel flag */
/* reset progress count */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            arg->backupTime;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* so RPC stuff wont free it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *cmd_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRUE,
                                                                                                                                                                 /* indicate idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              struct svc_req
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMAND_MARK_OBJECT ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "PushRpcInput failed");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                              "PushCommand failed");
                                                                                                                                                                                                                                                                                            LINE___
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LINE__,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            user restorable
                                                                                                                                                                                                                                                                                              LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                       *
```

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RE_get_mark_results_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ** Intended caller: RPC call from Restore API client
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Outputs:
Page 23 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 23 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       static
int
                                                                                                                             else
                                                                                                                                                                                                                  if ( (argzz.status = check_RPC_state( FALSE, COMMAND_MARK_OBJECT
                                                                                                                                                   /* test
                                                                                                                                                                                                                                            /* make sure mark is in progress */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               static RE_get_mark_results_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  if (outarg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             e: Function to test for completion of, or interrupt,
re_mark_object RPC call, and retrieve its output.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  set_rpc_obj( re_mark_object, &argzz.RPCobjID
                                                                                                                                                                                                  ī
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_get_mark_results_result *
                                                                                                                                                                                                  E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_get_mark_results_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_get_mark_results
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_get_mark_results_result
                                                                                                                                                                                                                                                                                                             argzz.dlrMarkCount = 0;
argzz.fileMarkCount = 0;
                                                                                                                         for completion of processing: later use
(PopResult( -1, &result, &cmd, &status)
                                                                                                                                                                                                                                                                                                                                                                             argzz.permDenyFileCount =
                                                                                                                                                                                                                                                                                                                                                                                                      argzz.badFileCount = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             outarg = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     result, cmd, status;
                                                                            if (status == COMMAND_RECORD_GET_FAILED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* init static output struct for errors (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     xdr_free( xdr_RE_get_mark_results_result, (char *)outarg );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 free( outarg );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* free last results */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             if *
../pgms_restore/EDMRestoreEngService.c 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (cmd_args) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   failure somewhere: free allocated memeory:
                              if (arg->interrupt)
                                                                                                                                                                       /* just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     xdr_free( xdr_RE_mark_object_args, (char *)cmd_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          free( cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  re_mark_object_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                           later use real flag */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *outarg = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                            1st time & aft errs */
    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                    \stackrel{\smile}{\sim}
Page 24 of 172
                                                                                                         *
                                ** Inputs:
                                                                              ** Routine:
                                                                                                                                 Page 24 of 172
                                                                                                                                                                                                                                                                set_rpc_obj( re_get_mark_results, &argzz.RPCobjID );
if (argzz.status == EP_RB_RECOVER_SERVERFAIL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else if (result != COMMAND_RESULT_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          else if (cmd != COMMAND_MARK_OBJECT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (argzz.status != E_SUCCESS)
                                                                                                                                                                                                                                            clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                           return outarg;
                                                                          re_unmark_object_1
                                                                                                                                                                                                                                                                                                                                                                                                        clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                            set_rpc_obj( re_get_mark_results, &outarg->RPCobjID);
                              RE_unmark_object_args * - args for the RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if (PopRpcOutput( (void **)&outarg, &status)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRestoreEng_logent( ___FILE___,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0, "PopRpcOutput argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRestoreEng_logent( ___FILE_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            argzz.status =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRestoreEng_logent( __FILE__, __LINE__, LOG_ERR, MESSAGE_INVALID_COMMAND, 0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  else
                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* return popped results struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* log error, clean up, return error
../pgms_restore/EDMRestoreEngService.c 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "PopResult mismatch: got %d command, expected %d\n",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* fall thru to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* log error, clean up, return error
EDMRestoreEng_logent( ___FILE__, ___LIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      re_get_mark_results_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if (PopResult( MAX_CANCEL_WAIT_SECS, &result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SetRpcCancelFlag();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* signal cancel, wait till done
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MESSAGE_FAILURE_DOING_ASYNC_RPC, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             argzz.status = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz.fileMarkCount = ReadProgressValue( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "RPC failure in process manager thread" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* if no result, error */
                                                                                                                                                                                                                      /* indicate process
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cmd, COMMAND_MARK_OBJECT);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 &cmd, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          return logic */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               status,
                                                                                                                                                                                                                                                                                                                                                                                   /* indicate process mgr idle */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _LINE__, LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0, "PopResult failed");
                                                                                                                                                                                                                        mgr idle on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   failure");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOG_ERR, status,
      Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LINE___
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOG_ERR,
                                                                                                                                                                                                                        fatals
                                                                                                                                                                                                                          *
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Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       re_unmark_object_1_svc(IN RE_unmark_object_args *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_mark_object_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ** Outputs: None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cmd_args = calloc( 1, sizeof(RE_unmark_object_args) );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if (NULL ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* make sure no rpc is in progress */
else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_unmark_object_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              static RE_mark_object_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ! = E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_mark_object_result * -
                                                                                                                                                                                                                                                                             else if (PushCommand( COMMAND_UNMARK_OBJECT, &status) )
                                                          else
                                                                                                                                                                                                                                        /* log
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                arg->thisObj = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if (PushRpcInput( (void *)cmd_args, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cmd_args->descend = arg->descend;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cmd_args->badFilesOnly = arg->badFilesOnly;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cmd_args->backupTime = arg->backupTime;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cmd_args->thisObj = arg->thisObj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ClearRpcCancelFlag();
ClearProgressValue();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cmd_args)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to unmark objects
                                                                                                                                                                                                                                          error,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Cannot malloc RE_unmark_object_args" );
                                 argzz.status = E_SUCCESS;
                                                                                                                         argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                            PopRpcInput( (void **)&cmd_args, &status);
                                                                                                                                                                                                         prror, clean up input queue, return error
EDMRestoreEng_logent( __FILE__, __LINE__,
                                                                                                                                                                                                                                                                                                                            argzz.status = EP_RB_RECOVER_SERVERFAIL;
clear_RPC_state( );  /* indicate idle
                                                                                                   clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                  EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                       /* log error, return error
   ../pgms_restore/EDMRestoreEngService.c 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             just return failure status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* note time of last RPC */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      re_unmark_object_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             result of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* reset cancel flag */
/* reset progress count */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* so RPC stuff wont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *cmd_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  restoral
                                                                                                                                                                                       status, 0,
                                                                                                                                                                                                                                                                                                                                                                                          status,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRUE, COMMAND_UNMARK_OBJECT ))
                                                                                               /* indicate idle on fatals
                                                                                                                                                                                                                                                                                                                                                                                                                  FILE
                                                                                                                                                                                                                                                                                                                          indicate idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                     "PushRpcInput failed");
                                                                                                                                                                    "PushCommand failed");
                                                                                                                                                                                                         LINE__,
                                                                                                                                                                                                                                                                                                                                                                                                              __LINE___,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOG_ERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  free it
                                                                                                                                                                                                              LOG_ERR,
Page 25 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                  LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Page 25 of 172
   Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    re_get_unmark_results_1_svc(IN RE_get_mark_results_args *arg.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_get_unmark_results_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ** Intended caller: Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ** Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ** Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* re_unmark_object_1 */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                  else
{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (outarg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              static
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   static RE_get_unmark_results_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               set_rpc_obj( re_unmark_object, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (argzz.status != E_SUCCESS)
{    /* failure somewhere: free allocated memeory:
                                                  ! = E_SUCCESS )
                                                                                             make sure unmark is in progress */
  ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RE_get_mark_results_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Function to test for completion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 re_get_unmark_results
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_get_unmark_results_result * -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_get_unmark_results_result
                                                                                                                                                                                                             argzz.fileMarkCount = 0;
                                                                                                                                                                                                                                argzz.dirMarkCount = 0;
                                                                                                                                                                                                                                                       argzz.badFileCount =
                                                                                                                                                                                     argzz.otherMarkCount = 0
                                                                                                                                                                                                                                                                                                                                                                                                                               xdr_free( xdr_RE_get_unmark_results_result,
                                                                                                                                                                                                                                                                                                                                                                                                            free( outarg );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        result, cmd,
                                                                                                                                                                                                                                                                                                 /* init static output struct for errors (
                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* free last results
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if (cmd_args) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   xdr_free( xdr_RE_unmark_object_args,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          free( cmd_args );
./pgms_restore/EDMRestoreEngService.c 14
                         just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* note time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              re_unmark_object_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of the unmark request
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of
                                                                      FALSE, COMMAND_UNMARK_OBJECT ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result of RPC function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *outarg = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RPC call
                                                                                                                                                                                                                                                                             1st time & aft errs
                                                                                                                                                                                                                                                                                                                                                                                                                                   (char *)outarg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            char *)cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 26 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                   ·;
                                                                                                                                                                                                                                                                             *
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                                                                                                  else if (PopResult( 1, &result, &cmd, &status) )
                                                                                                                          /* test for completion of processing: later use real flag
                                           if (status == COMMAND_RECORD_GET_FAILED)
if (arg->interrupt)
                                                                                                                                                             re_get_unmark_results_1_svc
                                                                                                                                                                Fri Jan 04 14:40:00 2008
                                                                                                                                                                Page 28 of 172
                                                         Routine:
                                                                                                       /* re_get_unmark_results_1 */
    re_submit
                                                                                                                                                             re_get_unmark_results_1_svc
                                                                                                                                                                    Fri Jan 04 14:40:00 2008
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set_rpc_obj( re_get_unmark_results, &argzz.RPCobjID );
if (argzz.status == EP_RB_RECOVER_SERVERFAIL)
clear_RPC_state( );
                                                                                                                                                                                                                                                                                                           else
                                                                                                                                                                                                                                                                                                                                                                                                                            else
{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             else
{
return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     else if (cmd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        if (argzz.status != E_SUCCESS)
                                                                                                                                                                                        return outarg
                                                                                                                                                                                                                                      set_rpc_obj( re_get_unmark_results, &outarg->RPCobjID);
clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                 if (PopRpcOutput( (void **)&outarg, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  if (result != COMMAND_RESULT_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRestoreEng_logent( ___FILE__,
                                                                                                                                                                                                                                                                                                                                              /* return popped results struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ! = COMMAND_UNMARK_OBJECT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         error, clean up, return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "PopResult mismatch: got %d command, expected %d\n",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* fall thru to error return logic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* log error, clean up, return error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* signal cancel, wait till done */
SetRpcCancelFlag();
if (PopResult( MAX_CANCEL_WAIT_SECS, &result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              argzz.fileMarkCount = ReadProgressValue( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      &cmd, &status) )
/* if no result, error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MESSAGE_FAILURE_DOING_ASYNC_RPC, 0,
"RPC failure in process manager thread" );
                                           /* indicate process mgr idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ___FILE__, __LINE__, LOG_ERR, MESSAGE_INVALID_COMMAND, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMAND_UNMARK_OBJECT);
                                                                                                                                                                                                                 indicate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _LINE___, LOG_ERR
                                                                                                                                                                                                             process mgr
                                                                                                                                                                                                                                                                                                                                                                                                       LOG_ERR, status,
                                                                                                                                                                                                                 idle */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
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re_submit_1_svc( IN RE_submit_args *arg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* make sure no rpc is in progress */
else if ( (argzz.status = check_RPC_state( TRUE, COMMAND_SUBMIT ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cmd_args = calloc( 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_submit_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        static RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 if (NULL == cmd_args)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 objects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ! = E_SUCCESS )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_status_result * -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_submit_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Function to prepare for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IN struct svc_req
                                                                                                                                                                                                                       cmd_args->socketPort= arg->socketPort;
cmd_args->mapFile_env = esl_strdup(arg->mapFile_env);
if (PushRpcInput( (void *)cmd_args, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ClearRpcCancelFlag( ); /* reset cancel flag */
ClearProgressValue( ); /* reset progress count */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               argzz.status = EP_RB_RECOVER_NOMEM;
else if (PushCommand( COMMAND_SUBMIT,
                                                                                                                                                                                                                                                                                                                              cmd_args->socketClientName = esl_strdup(
                                                                                                                                                                                                                                                                                                                                                  cmd_args->submitObjectID = arg->submitObjectID;
                                                                                                                                                                                                                                                                                                                                                                               cmd_args->transport = arg->transport;
                                                                                                                                                                                                                                                                                                                                                                                                       cmd_args->inPlace = arg->inPlace;
                                                                                                                                                                                                                                                                                                                                                                                                                               cmd_args->overwritePolicy = arg->overwritePolicy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     cmd_args->directory = esl_strdup( arg->directory );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cmd_args->hostname = esl_strdup( arg->hostname );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDMRestoreEng_logent( ___FILE___,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Cannot malloc RE_submit_args" );
                                                                                                                      EDMRestoreEng_logent( __FILE__, status, 0,
                                                                    argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                  clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* just return failure status
                                                                                                                                                                         log error,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sizeof(RE_submit_args) );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          args for the RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *cmd_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                         return error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MESSAGE_NO_MEMORY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         restore of the currently marked
                                                  /* indicate idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LINE_
&status) )
                                                                                                                                                                                                                                                                                                    arg->socketClientName);
                                                                                                  "PushRpcInput failed");
                                                                                                                                                 __LINE___,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             errno,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOG_ERR,
                                                    no
                                                                                                                                                     LOG_ERR,
                                                    fatals */
```

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RE_get_submit_results_output *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** Intended caller: Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ** Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               return &argzz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          set_rpc_obj( re_submit,
                                                                                                                                               else
{
                                                                                                                                                                                                                                                                                                                                if (outarg)
                                                                                                                                                                                                                                                                                                                                                                               setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                     static
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        static RE_get_submit_results_output
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_get_submit_results_output * - result of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_get_submit_results_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (argzz.status != E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Function to test for completion of the previously started submit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          re_get_submit_results
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              operation.
                                                                                                                                                                                                                                                                                                                                                                                                                                               RE_get_submit_results_output
sure submit is in progress */
                                                                       argzz.objectsDone =
                                                                                            argzz.submitObjectID = 0;
                                                                                                                                     /* init static output struct for errors
                                                                                                                                                                                                                                                                             xdr_free( xdr_RE_get_submit_results_output, (char *)outarg );
                                                                                                                                                                                                                                        outarg =
                                                                                                                                                                                                                                                              free( outarg );
                                                                                                                                                                                                                                                                                                                                                                                                                            result,
                                                                                                                                                                                                                                                                                                         /* free last results */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* log error, clean up input queue, return error
EDMRestoreEng_logent( __FILE__, __LINE__,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (cmd_args) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            failure somewhere: free allocated
                                                                                                                                                                                                                                                                                                                                                                                                                            cmd,
                                                                                                                                                                                                                                        NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        free ( cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             xdr_free( xdr_RE_submit_args, (char *)cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             argzz.status = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PopRpcInput( (void **)&cmd_args, &status);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                            status;
                                                                                                                                                                                                                                                                                                                                                                               /* note time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           re_submit_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            args for the RPC
                                                                                                                                                                                                                                                                                                                                                                               of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         status, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 *outarg = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* indicate idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              memeory:
                                                                                                                   1st time & aft errs */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "PushCommand failed");
                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             __LINE__,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Page 29 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                 else
                                                                                                                                                                                                                                                                                                                                                       else if (PopRpcOutput( (void **)&outarg, &status) )
{
                  set_rpc_obj( re_get_submit_results, &argzz.RPCobjID
if (argzz.status == EP_RB_RECOVER_SERVERFAIL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else if (result != COMMAND_RESULT_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         else if (cmd != COMMAND_SUBMIT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ħ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /* test
else if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if ( (argzz.status = check_RPC_state( FALSE, COMMAND_SUBMIT ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (argzz.status != E_SUCCESS)
                                                                                                                                                                                    set_rpc_obj( re_get_submit_results, &outarg->RPCobjID);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ! = E_SUCCESS
clear_RPC_state( );
                                                                                                                                                              clear_RPC_state( );
                                                                                                                   return outarg;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDMRestoreEng_logent( ___FILE___,
                                                                                                                                                                                                                                                                               0, "PopRpcOutput failure");
argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                      EDMRestoreEng_logent( ___FILE_
                                                                                                                                                                                                                                                                                                                                                                                                                          argzz.status =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDMRestoreEng_logent( __FILE__,
                                                                                                                                                                                                           /* return popped results struct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     else {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* log error, clean up, return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for completion of processing: later use r (PopResult( -1, &result, &cmd, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 if (status == COMMAND_RECORD_GET_FAILED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* fall thru to error return logic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* log error, clean up, return error
EDMRestoreEng_logent( __FILE__, __LIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               else {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'PopResult mismatch: got %d command, expected %d\n",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      if (arg->interrupt)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if (PopResult( MAX_CANCEL_WAIT_SECS, &result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* signal cancel, w
SetRpcCancelFlag();
                                                                                                                                                                                                                                                                                                                                                                                                                          EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  argzz.objectsDone = ReadProgressValue( );
argzz.status = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       re_get_submit_results_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* if no result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 "RPC failure in process manager thread"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MESSAGE_FAILURE_DOING_ASYNC_RPC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE__, __LINE__, LOG_ERR, MESSAGE_INVALID_COMMAND, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     &cmd, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMAND_SUBMIT);
                                                                                                                                         *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  status,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       later use real flag */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           wait till done
                                                                                                                                                                                                                                                                                                                            __LINE
                                                                                                                                       indicate process mgr idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _LINE___, LOG_ERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0, "PopResult failed");
                                                                                                                                                                                                                                                                                                                            LOG_ERR, status,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LINE_,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 30 of 172
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            re_start_1_svc(IN RE_start_args *arg, IN struct svc_req
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 31 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         else if ( (argzz.status =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* make sure no rpc is in progress */
else if ( (argzz.status = check_RPC_state( TRUE, COMMAND_START ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (NULL == cmd_args)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cmd_args = calloc( 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RE_start_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          static RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               return
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          , <u>...</u>
]]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Function to start the restore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E_SUCCESS )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_status_result * - result of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RE_start_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  re_start_1
                                                                                                                                                                                                                                                                                                                                         purgeProgress();
ClearRpcCancelFlag();
ClearProgressValue();
                                                                                              } else if (PushCommand( COMMAND_START, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              &argzz;
                                                                                                                                                                                                                                                                                                       cmd_args->submitObjectID =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Cannot malloc RE_start_args" argzz.status = EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDMRestoreEng_logent( __FILE___,
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                                                                                                                                                                                                                                                                  (PushRpcInput( (void *)cmd_args, &status) )
                                                         log error, clean up input queue, return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Internal Only.
                                                                                                                                     clear_RPC_state( );
                                                                                                                                                      argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                            EDMRestoreEng_logent(
                                          EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          re_get_submit_results_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sizeof(RE_start_args) );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *cmd_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for the RPC
                                                                                                                                                                                                                               return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MESSAGE_NO_MEMORY, errno,
                                                                                                                                                                                                                                                                                                                                        /* reset cancel flag */
/* reset progress count
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   indicate process mgr idle on fatals */
                                                                                                                                                                                                                                                                                                      arg->submitObjectID;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RPC
                        status, 0,
                                                                                                                                                                                          status, 0,
                                                                                                                                                                                                            _FILE_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        function
                                                                                                                                    /* indicate idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LINE,
                                                                                                                                                                        "PushRpcInput failed");
                                                                                                                                                                                                             __LINE__,
                                        LINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOG_ERR,
Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                             *
                                                                                                                                     on fatals */
                                                                                                                                                                                                             LOG_ERR
                                            LOG_ERR
                                                                                                                                                                                                                                                                                                                                                                                                                      re_get_restore_feedback_1_svc(IN RE_get_restore_feedback_args *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                       RE_get_restore_feedback_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 32 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inputs:
                                                                                             memset( &argzz, 0, sizeof(RE_get_restore_feedback_result) );
                                                                                                                                                                                                                                                                  int    result, cmd, status, ret = 0;
struct timeval timeofday;
                                                                                                                                                                                                                                                                                                                         RE_status_result static RE_Notification
                                                                                                                                                                                                             setLastRpcTime( );
                                                                                                                                                                                                                                                   void
                                                                                                                                                                                                                                                                                                         static
                                                                                if (NULL == (notify = calloc( 1, sizeof(RE_Notification) )))
                                                                                                                                                      if (NULL != notify)
                                                                                                                                                                                                                                                                                                                                                           static RE_get_restore_feedback_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      specified time.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         set_rpc_obj( re_start,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           J.f.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Function to determine the
                                                                                                                                                                        init static output struct for progress */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RE_get_restore_feedback_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (argzz.status != E_SUCCESS)
/* failure somewhere:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_get_restore_feedback
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RE_get_restore_feedback_result * -
                                                                                                                                                                                                                                                                                                         long
                                          EDMRestoreEng_logent( __FILE__,
                                                                                                                                    xdr_free( xdr_RE_get_restore_feedback_result,
                                                                                                                                                                                                                                                   *dummy = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (cmd_args) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        }
else
../pgms_restore/EDMRestoreEngService.c 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      xdr_free( xdr_RE_start_args,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    free ( cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      setExternalStatus( RE_STATE_STARTING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PopRpcInput( (void **)&cmd_args, &status);
                                                                                                                                                                                                                                                                                                                                                                                                   IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_start_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          &argzz.RPCobjID
                                                                                                                                                                                                                                                                                                          lasttime =
                                                                                                                                                                                                                                                                                                                                           *outarg = NULL;
                                                                                                                                                      /* release old feedback */
                                                                                                                                                                                                             /* note time of last RPC
                     MESSAGE_NO_MEMORY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         state
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           free allocated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E_SUCCESS;
                                                                                                                                                                                                                                                                                                                            *notify = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           аn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             result of RPC function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* indicate idle
                                             LINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for the RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ongoing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (char *)cmd_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "PushCommand
                                                                                                                                                                                                                 *
                           errno,
                                            LOG_ERR,
Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fri Jan 04 14:40:00 2008
                                                                                                                   char *)&argzz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     failed");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  call
```

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Fri Jan 04 14:40:00 2008
```

```
../pgms_restore/EDMRestoreEngService.c 21
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```

** Outputs:

None

Fri Jan 04 14:40:00 2008

../pgms_restore/EDMRestoreEngService.c 22

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```
Fri Jan 04 14:40:00 2008
```

re_get_restore_feedback_1_svc

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__LINE__, LOG_ERR, status, "PopRpcOutput failure");

(char *)outarg);

/* back to browsing

*

/* back to browsing */

LOG_ERR, status,

0

*

```
1:f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       if (ret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         make sure restore (start) is in progress */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* test for completion of processing: later use real flag */
if ( (ret = PopResult( -1, &result, &cmd, &status)) != 0 )
                                                                                                                                                                                                                                                                                                                                                                                                                                      1£
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        else {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if (status == COMMAND_RECORD_GET_FAILED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            set_rpc_obj( re_get_restore_feedback, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   argzz.status = EP_RB_RECOVER_NOMEM;
                                                                                                                             EDMRestoreEng_logent( ___FILE
                                                                                                                                                                                                                                                                                                                                                                                                                                    (cmd != COMMAND_START)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           !!
!!
    argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                    argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                           EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 else
                                                                                                                                                                                                                                                                                                                                                                                    /* log error,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* log error, clean up, return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if (arg->quit_restore)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* set cancel if requested */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                    (result !=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz.status = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              else { /* result popped, leave E_SUCCESS to */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SetRpcCancelFlag();
if ( ret = PopResult( MAX_CANCEL_RESTORE_WAIT_SECS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* if no result, user must keep trying */
argzz.status = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                           "PopResult mismatch: got %d command,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              re_get_restore_feedback_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* update (final) stats below */
                                                                                                                                                                                                                                                                                                                                                                                    clean up,
                                                                                                                                                                                  COMMAND_RESULT_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 no cancel and not done already */
                                                    "RPC failure in process manager thread"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FALSE, COMMAND_START )) == E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cannot malloc RE_Notification" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE,
                                                                                                                                                                                                                                                                                                                                                                                    return error */
                                                                                                   "ILE__, __LINE__, LOG_ERR,
MESSAGE_FAILURE_DOING_ASYNC_RPC,
                                                                                                                                                                                                                                                                                                                                 MESSAGE_INVALID_COMMAND,
                                                                                                                                                                                                                                                                                                                                                                FILE
                                                                                                                                                                                                                                                          cmd, COMMAND_START);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        &result, &cmd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              __LINE__, LOG_ERR, "PopResult failed");
                                                                                                                                                                                                                                                                                                                                                           LINE___,
                                                                                                                                                                                                                                                                                                                             , LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                &status)) !=
                                                                                                                                                                                                                                                                                   expected %d\n",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 33 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
** Inputs:
                                   *
                                                    ** Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             if (argzz.status == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                      set_rpc_obj( re_get_restore_feedback, &argzz.RPCobjID );
                                                                                                                                                                                                        return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                  ret = PopNotifications( notify, &status );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gettimeofday( &timeofday, dummy );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if (0 != getRestoreStatus( lasttime, &argzz.rstStats, &status
                                                                                                                                                     end of re_get_restore_feedback_1 */
  RE_null_args
                                                  re_get_question
                                                                                                                                                                                                                                                                                                                                 argzz.notify = notify;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      if (argzz.status == EP_RB_RECOVER_SERVERFAIL) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         else
{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              lasttime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     setGlobalStatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lasttime = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           setGlobalStatus (EDMRE_STATE_BROWSING);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lasttime = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* log error, continue */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  if (PopRpcOutput( (void **)&outarg, &status) )
  * - args for the RPC call (none)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             = timeofday.tv_sec -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  argzz.status = outarg->status;
xdr_free( xdr_RE_status_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            free( outarg );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* indicate process mgr idle on fatals */
/* in case multiple starts possible later */
(EDMRE_STATE_BROWSING);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* in case multiple starts possible later */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE__,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* for time of getRestoreStatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* indicate process mgr idle
```

```
*
                                                                                                                                                             *
                                                                                                                                                                                               /******
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    re_get_question_1_svc( IN RE_null_args
 Page 35 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RE_get_question_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 35 of 172
                                                         Return Codes:
                                                                                           Outputs:
                                                                                                                                                             Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Return
                                                                                                                                                                                                                                                                                                                                             else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             else
{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                else
                                                                                                                                                                                                                                              return &argzz;
                                                                                                                                                                                                                                                                            set_rpc_obj( re_get_question,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   memset ( &question, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  argzz.query = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* dont free last question
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     static Question
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     static RE_get_question_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Codes:
                                                                                                                         RE_set_user_answer_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 make sure restore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in
                                                                                         None
                                                                                                                                                           re_set_user_answer
                                         RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ı.
É
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 r.
f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ake sure restore (start) is in progress */
(argzz.status = check_RPC_state( FALSE, C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            proper state: fetch question from question queue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _get_question_result * -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ( 0 !=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (getExternalStatus() != RE_STATE_STOPPED)
                                                                                                                                                                                                                                                                                                                                                                                              else
                                                                                                                                                                                                                                                                                                                                                                                                                                              if (
                                                                                                                                                                                                                                                                                                                             argzz.query = \&question;
                                                                                                                                                                                                                                                                                                                                                                                                                              status
                                                                                                                                                                                                                                                                                                                                                                                                                                                             argzz.status = EP_RB_RECOVER_INVALOP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       result, status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /* not awaiting answer, either user error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* dequeue question failed -- log error, continue
 ../pgms_restore/EDMRestoreEngService.c 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       to retrieve
                                                                                                                                                                                                                                                                                                                                                                                                                            == QUESTION_RECORD_GET_FAILED) /* assume user
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (result = PopQuestion( 1, &question, &status ) ) )
                                                                                                                                                                                                                                                                                                                                                                             argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                            argzz.status = EP_RB_RECOVER_INVALOP;
                                                                                                                                                                                                                                                                                                                                                                                              /* internal error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 re_get_question_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sizeof(Question));
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* init response structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *
                                          result of RPC function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ø

    its owned

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        restore execution
                                                                                                                           ı
                                                                                                                                                                                                                                                                            &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *arg,
                                                                                                                         args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       question;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IN
                                                                                                                         for
                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Уď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         struct svc_req *req )
                                                                                                                         the
                                                                                                                                                                                                                                                                                                             return
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    process thread.
                                                                                                                           RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMAND_START ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             function
                                          call
                                                                                                                                                                                                                                                                                                             question
                                                                                                                           call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or aborted
    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This is copy*/
                                                                                                                                                                                                                                                                                                             structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                status, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                              wrong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
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Page 36 of 172
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                                                                                                                                                                                                                                               RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 36 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ** Intended caller:
                                                                                                         Return Codes:
                                                                                                                                          Outputs:
                                                                                                                                                                          Inputs:
                                                                                                                                                                                                            Routine:
                                                         Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    else if (getExternalStatus() != RE_STATE_STOPPED)
{
    /* not awaiting answer, either user error
    argzz.status = EP_RB_RECOVER_INVALOP;
                                                                                                                                                                                                                                                                                                             return &argzz;
                                                                                                                                                                                                                                                                                                                                               set_rpc_obj( re_set_user_answer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      else if ( PushAnswer( &arg->answers, &status ) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if ( (argzz.status = check_RPC_state( FALSE,
!= E_SUCCESS )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          static RE_status_result argzz;
int status:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* in proper state: push response on answer queue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        setLastRpcTime( );
                                                                                                                                          None
                                                          Function to
                                                                                        RE_get_top_level_templates_result *
                                                                                                                                                                          RE_get_top_level_templates_args
                                                                                                                                                                                                          re_get_top_level_templates_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Function to
                          backup object
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             arg->answers.firstanswer = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* enqueue failed -- log error, continue */
 ../pgms_restore/EDMRestoreEngService.c 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                 clear answer list pointer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Internal Only.
                                                       retrieve templates configured
                                                                                                                                                                                                                                                                                                                                                                                                                                                                setExternalStatus(RE_STATE_POSTPHASE);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* just return failure status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              return the user response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    re_set_user_answer_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "PushAnswer failed");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE___,
                                                                                                                                                                                                                                                                                                                                               &argzz.RPCobjID );
                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                 since its now on answer queue
                                                                                                                                                                             ì
                                                                                                                                                                          args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LINE___,
                                                                                           result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a restore
                                                                                                                                                                             for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMAND_START
                                                          for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *
                                                                                                                                                                                                                                                                                                                                                                                                 so only freed once
                                                                                            0£
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOG_ERR, status,
                                                          the current
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \sigma
     Fri Jan 04 14:40:00 2008
                                                                                            RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fri Jan 04 14:40:00 2008
                                                                                                                                                                             RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            aborted */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              execution query
                                                                                            function call
                                                                                                                                                                           call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           \stackrel{\smile}{\sim}
                                             level
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re_get_current_template_1_svc(IN RE_null_args *arg,
                                                                                                     RE_get_current_template_result *
                                                                                                                                                                                                                                                                                                                                                       * *
* *
                                                                                                                                                                                                                  * * *
                                                                                                                                                                                                                                                                             * *
* *
                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                           ** Intended caller:
                                                                                                                                                                                                                                                                                                                                   ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                ** Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           /*****
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                re_get_top_level_templates_1_svc( IN RE_get_top_level_templates_args
IN struct svc_req *req)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_get_top_level_templates_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ** Intended caller: Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                    Return Codes:
RE_get_current_template_result *
 static RE_get_current_template_result argzz;
static char template_buff[MAX_TEMPLATE_LEN] = "";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             set_rpc_obj( re_get_top_level_templates, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      argzz.numEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if ( (argzz.status = check_RPC_state( FALSE, COMMAND_NONE_ACTIVE
!= E_SUCCESS) /* if not idle, trouble */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    argzz.templates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           argzz.cookie = arg->cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        if (lastNumEntries)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         static RE_get_top_level_templates_result argzz;
static short lastNumEntries = 0;
                                                                                                                                                                                                                                                                                                                                                                        RE_null_args
                                                                                                                                                                                                                                  Function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          free last call's output: */
                                                                                                                                                                                                                                                                                                                                                                                                                re_get_current_template
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        argzz.status = RSTSL_GetTopLevelTemplates( arg->topLevelObj,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 xdr_free( xdr_RE_get_top_level_templates_result, (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          lastNumEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lastNumEntries =
                                                                                                                                                                                           Internal Only.
                                                                                                                                                                                                                                  tο
                                                                                                                                                                                                                                 retrieve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* we weren't idle, leave templates=NULL;
                                                                IN struct svc_req *req
                                                                                                                                                                                                                                                                                                                                                                       args for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               re_get_top_level_templates_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        = argzz.numEntries;
                                                                                                                                                                                                                               trhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* note time
                                                                                                                                                                                                                             currently selected template name
                                                                                                                                                                                                                                                                                                                                                                          the RPC
                                                                                                                                                                                                                                                                                                                                                                        call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of
                                                                                                                                                                                                                                                                        result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 last RPC
                                                                                                                                                                                                                                                                                                                                                                          (none)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 &argzz.templates,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     arg->maxEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               &argzz.numEntries,
                                                                                                                                                                                                                                                                    of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             char *)&argzz);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 reject call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page 37 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_get_necessary_media_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ** Intended caller: Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Inputs:
                                                                else {
                                                                                                                                                else
                                                                                                                                                                                                         if (NULL == arg)
                                                                                                                                                                                                                                                                                                                                                                       setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                  static
                                                                                                                                                                                                                                                                                                                                                                                                                                   static RE_get_necessary_media_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          currently marked objects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             set_rpc_obj( re_get_current_template, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 else {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       if ( (argzz.status = check_RPC_state( FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* init output struct ptr first time;
                                                                                                     ! = E_SUCCESS)
                                                                                                                                                                                                                                                                                                            (media_list) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ;_
||
                                                                                                                                                                                                                                                                                                                            free previosly returned list of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Function to retrieve the list of media need
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_get_necessary_media_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (template_buff[0]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  re_get_necessary_media
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_get_necessary_media_result * - result of
                                                                                                                                              if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                  RSTRPC_media_list
argzz.cookie = arg->cookie;
                                                                                                                                                                                    argzz.status =
                       argzz.numEntries = 0;
                                                                                                                                                                                                                                                                   media_list = NULL;
                                                                                                                                                                                                                                                                                      RSTSL_FreeMediaObjectList( media_list
                                          /* init result structure */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        template_buff[0] =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         argzz.templateName = template_buff;
                                                                                  /* we weren't idle, reject call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     we weren't idle, reject call */
                                                                                                                                                                                      EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          re_get_current_template_1_svc
                                                                                                         /* if not idle,
                                                                                                                                                                                                                                                                                                                                                                        /* note time of last RPC */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* if not idle, trouble */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                *media_list =
                                                                                                                                                                                                                                                                                                                                 media
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clear string other times
                                                                                                         trouble */
                                                                                                                           FALSE, COMMAND_NONE_ACTIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the
                                                                                                                                                                                                                                                                                                                                                                                                                  NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               to restore the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 38 of 172
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RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ****************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *
 Page 39 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page 39 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  set_rpc_obj( re_get_necessary_media, &argzz.RPCobjID );
                                                                                                         else
                                                                                                                                                                  else
                                                                                                                                                                 /* make sure no RPC is in progress */
else if (E_SUCCESS != (argzz.status =
                                                                                                                                                                                                                                                                                                                                       if (NULL
                                                                                                                                                                                                                                                                                                                                                        cmd_args =
                                                                                                                                                                                                                                                                                                                                                                                                              if (NULL == arg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                    setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       int
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_get_all_backup_times_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            static RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RE_get_all_backup_times_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Function to start the asynchronous operation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_status_result * - result of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_get_all_backup_times
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   backups available
                                                                                                                                                                                                                                                                                               EDMRestoreEng_logent(
                                               cmd_args->flags = arg->flags;
                                                                 cmd_args->endTime = arg->endTime;
                                                                                   cmd_args->startTime = arg->startTime;
                                                                                                                                                                                                                       argzz.status =
                                                                                                                                                                                                                                                                                                                                                                                           argzz.status = EP_RB_RECOVER_RPC_FAIL;
                          cmd_args->maxEntries = arg->maxEntries;
                                                                                                                                                                                                                                                                                                                                       H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   media_list
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         argzz.mediaList = NULL;
 ../pgms_restore/EDMRestoreEngService.c 27
                                                                                                                                                                                                                                                                                                                                                        calloc( 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RPC call from Restore API client
                                                                                                                                                                                                                                                                                                                                    cmd_args)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_get_necessary_media_1_svc
                                                                                                                          /* just return failure status
                                                                                                                                                             != (argzz.status = check_RPC_state( TRUE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ********************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  argzz.mediaList;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  = RSTSL_GetNecessaryMedia( arg->maxEntries,
                                                                                                                                                                                                                                                                                                                                                      sizeof(RE_get_all_backup_times_args) );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for the current workitem
                                                                                                                                                                                                                        EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* note time of last RPC */
                                                                                                                                                                                                                                                          "Cannot malloc
                                                                                                                                                                                                                                                                            MESSAGE_NO_MEMORY,
                                                                                                                                         COMMAND_GET_ALL_TIMES )) )
                                                                                                                                                                                                                                                                                                FILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *cmd_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            args
                                                                                                                                                                                                                                                           RE_get_all_backup_times_args"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* save to free next time in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             argzz;
                                                                                                                                                                                                                                                                                                LINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for the RPC
                                                                                                                                                                                                                                                                              errno,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to find
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       &argzz.cookie );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       arg->all,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          &argzz.numEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           &argzz.mediaList,
                                                                                                                                                                                                                                                                                                LOG_ERR,
Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          all
                                                                                                                                                                                                                                           *
                                                                                                                                    Page 40 of 172
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* *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         *
                                                                                                                                                                                                                                                           ** Intended caller: RPC call from Restore API client
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ** Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 40 of 172
                                                                                                                                                                                                                                                                                                                   Purpose:
                                                                                                                                                                                                                                                                                                                                                                            Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                 Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inputs:
                                                               static
                                                                                   static
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            set_rpc_obj( re_get_all_backup_times, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         return &argzz,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (argzz.status != E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_get_all_backup_times_result
                                                                                                                                                                                                                                                                                                                                                                                                                   None
                                                                                                                                                                                                                                                                                                  Function to test for completion of the re_get_all_backup_times RPC call, and retrieve some or all of its output.
                                                                                                                                                                                                                                                                                                                                                      RE_get_all_backup_times_result * - result of RPC function call
                                                               RE_get_all_backup_times_result *outarg
                                                                                   RE_get_all_backup_times_result
                                                result, cmd,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 if (cmd_args) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* log
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (PushRpcInput( (void *)cmd_args, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cmd_args->cookie = arg->cookie;
../pgms_restore/EDMRestoreEngService.c 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       failure somewhere:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         error, clean up input queue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              xdr_free( xdr_RE_get_all_backup_times_args,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    re_get_all_backup_times_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          free ( cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz.status = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PopRpcInput( (void **)&cmd_args, &status);
argzz.status = EP_RB_RECOVER_SERVERPAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (PushCommand( COMMAND_GET_ALL_TIMES, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   argzz.status = EP_RB_RECOVER_SERVERFAIL;
clear_RPC_state( );  /* indicate idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                        * - No args for this RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* log error,
                                                status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (char *)cmd_args);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       free allocated memeory:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  status, 0,
                                                                                  argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          status, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             __FILE___,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* indicate idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* indicate idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         return error
                                                                   Ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "PushRpcInput failed");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "PushCommand failed");
                                                                   NULL;
                                                                                                                                              *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 __LINE___,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LINE___,
      Fri Jan 04 14:40:00 2008
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOG_ERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fatals */
```

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Fri Jan 04 14:40:00 2008
    setLastRpcTime( );
                                   re_get_all_backup_times_result_1_svc
    /* note time of last RPC */
                                 Page 41 of 172
                                 Fri Jan 04 14:40:00 2008
                           re_get_all_backup_times_result_1_svc
/* indicate
                           Page 42 of 172
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else
{
                                                                else
                                                                                                                                                                                                                                                                                                                   else
{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* test
else if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              else
{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             if (NULL == arg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if (outarg) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          make sure this RPC is in progress */
   clear_RPC_state( );
                    set_rpc_obj( re_get_all_backup_times_result, &outarg->RPCobjID);
                                                                                                                                                                                             ı.
É
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H.
                                                                                                                                                                                                                                                                                                                                         if (result
                                                                                                                                                                                                                                                                                               EDMRestoreEng_logent(
                                                                                                                                                                                        (PopRpcOutput( (void **)&outarg, &status)
                                                                                                        argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                               EDMRestoreEng_logent( __FILE__,
                                                                                                                                                                                                                                      argzz.status =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (cmd != COMMAND_GET_ALL_TIMES)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               } else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (PopResult ( -1, &result, &cmd, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for completion of processing */
                                        /* return popped results struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if (status == COMMAND_RECORD_GET_FAILED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             argzz.backupTimes = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   argzz.cookie = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        argzz.numEntries =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* init static output struct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          xdr_free( xdr_RE_get_all_backup_times_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              outarg->backupTimes = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       free( outarg );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* free last results */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  != (argzz.status = check_RPC_state( FALSE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     = NULL;
                                                                                                                                                                                                                                                                                                                                      ! = COMMAND_RESULT_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  argzz.status = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                                                                                                               "PopResult mismatch: got %d command, expectecmd, COMMAND_GET_ALL_TIMES);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (char *)outarg );
                                                                                                                                                                                                                                                                                                                                                                              = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clean up,
                                                                                                                                                                                                                                EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                 nt( __FILE__, __LINE__, LOG_ERR, MESSAGE_FAILURE_DOING_ASYNC_RPC , 0, "RPC failure in process manager thread" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           clean up, return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     return error */
                                                                                                                                                                                                                                                                                                                                                                                                                                       MESSAGE_INVALID_COMMAND, 0,
                                                                                                                         "PopRpcOutput failure");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for errors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* this is freed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 __FILE__, __LINE__, LOG_ERR, status, 0, "PopResult failed");
                                                                                                                                                 LINE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMAND_GET_ALL_TIMES ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LINE__,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1st time & aft errs */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOG_ERR
                                                                                                                                               LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                       expected %d\n",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vд
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RSTSL_{-}...
                                                                                                                                                 status,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *
                                      ** Outputs:
** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       * *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *
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** Inputs:
                                                                          ** Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_get_current_backup_time_result *
                                                                                                                   re_get_current_backup_time_1_svc(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Routine:
                                                                                                                                                                     return &argzz;
                                                                                                                                                                                                         set_rpc_obj( re_get_current_backup_time,
                                                                                                                                                                                                                                                                                                    else
                                                                                                                                                                                                                                                                                                                                                                              else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                        if (NULL == arg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         argzz.backupTime = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       static RE_get_current_backup_time_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* init result structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* return static result struct on errors */
set_rpc_obj( re_get_all_backup_times_result,
if (argzz_status == EP_RB_RECOVER_SERVERFAIL)
                                                                                                                                                                                                                                                                                                                                           11
                                    RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Function to retrieve the currently selected backup time
None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE_null_args
                                                                          re_is_there_prev_backup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_get_current_backup_time_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       re_get_current_backup_time
                                                                                                                                                                                                                                                                                                                                        E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     return outarg;
                                                                                                                                                                                                                                                                                  argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                      argzz.status = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Internal Only.
                                                                                                                                                                                                                                                                                                                        we weren't
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   args for the
                                                                                                                                                                                                                                                                                   RSTSL_GetCurrentBackupTime(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IN RE_null_args *arg, IN
                                                                                                                                                                                                                                                                                                                                          /* if not idle, trouble */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* indicate process
                                                                                                                                                                                                                                                                                                                         idle, reject call */
                                    args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RPC
                                       for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   call
                                                                                                                                                                                                                                                                                                                                                            FALSE, COMMAND_NONE_ACTIVE
                                                                                                                                                                                                           &argzz.RPCobjID );
                                       the RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        result of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (none)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       &argzz.RPCobjID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             struct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mgr
                                       call
                                                                                                                                                                                                                                                                &argzz.backupTime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    process mgr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             svc_req *req
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    fatals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       idle
                                                                                                                                                                                                                                                                                                                                                               \stackrel{\smile}{\sim}
                                                                                                                                                                                                                                                                    <u>`</u>
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RE_boolean_result
                                                                                                                                                                                                                                                                                                        ** Intended caller: Internal Only.
   Page 43 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE_boolean_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*****
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page 43 of 172
                                                                                                                                                                                                                                                                                                                                                                                                             Return Codes:

RE_boolean_result * - result of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                        Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Routine:
                                                                                                                ίf
                                                                                                                                                                                   static RE_boolean_result
                                                            else if ( (argzz.status = check_RPC_state(
                                                                                                                                                setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                     specified time.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              set_rpc_obj( re_is_there_prev_backup, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     else {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if (NULL == arg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               static RE_boolean_result argzz;
                            ! = E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ! = E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_backup_for_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           None
                                                                                                                                                                                                                                                                                                                                                                                        Function to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               re_is_there_next_backup_for_time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_boolean_result
                                                                                              argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    argzz.status
                                                                                                               == arg)
    ../pgms_restore/EDMRestoreEngService.c 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       to test if there is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    **********************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_is_there_prev_backup_1_svc
                                                                                                                                                                                                                                                                                                                                                                                         test if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* if not idle, trouble */
we weren't idle, reject call */
                                                                                                н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               = EP_RB_RECOVER_RPC_FAIL;
                                                                                              EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                        there is a backup available more recent than
                                                                                                                                                  /* note
                           /* if not idle, trouble */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* note time of last RPC
                                                                                                                                                                                   argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result of RPC function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               * - args for the
                                                                                                                                                   time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       older backup available
                                                                                                                                                                                                                  svc_req *req
                                           FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RPC call
                                                                                                                                                   *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *
    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fri Jan 04 14:40:00 2008
                                 ** Outputs:
                                                                                                   *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RE_boolean_result * re_is_there_next_backup_1_svc(IN RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ** Intended caller: Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 44 of 172
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                                                                                                                                                     *
                                                                                                               ** Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ** Return Codes:
**
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Purpose: Function to test in the currently selected time.
                                                                                                                                                   Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Routine:
                                                                                                                                                                                                                                    return &argzz
                                                                                                                                                                                                                                                                      set_rpc_obj( re_is_there_next_backup,
                                                                                                                                                                                                                                                                                                                                                        else {
                                                                                                                                                                                                                                                                                                                                                                                                                            else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (NULL ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  static RE_boolean_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     set_rpc_obj( re_is_there_next_backup_for_time, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else {
                                                                                                                                                                                                                                                                                                                                                                                              .<u>-</u>
                                                                                                               RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Function to test if there
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RE_set_backup_time_args
                                             None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               None
                                                                                                                                                  set_backup_time_request
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_boolean_result * - result of RPC
                                                                                                int
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 re_is_there_next_backup
                                                                              int rpc_function_no
                                                                                                                                                                                                                                                                                                                                                                                           E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    &argzz;
                                                                                                                                                                                                                                                                                                                                         argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                                                               argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            argzz.status = RSTSL_IsThereNextBackupForTime( arg->time,
../pgms_restore/EDMRestoreEngService.c 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     re_is_there_next_backup_for_time_1_svc
                                                                                              internal_command
                                                                                                                                                                                                                                                                                                                                                                            /* we weren't
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              we
                                                                                                                                                                                                                                                                                                                                         = RSTSL_IsThereNextBackup( arg->flags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      struct svc_req *req
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              weren't
                                                                                                                                                                                                                                                                                                                                                                                                                                                                EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                          /* if not idle, trouble */
ren't idle, reject call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* note time of last RPC */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            is a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              idle,
                                                                                                                args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   args for the RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              backup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reject call
                                                                                                                  for the RPC call
                                                                                                                                                                                                                                                                      &argzz.RPCobjID
                                                                                                                                                                                                                                                                                                                                                                                                               FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            available more
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *arg
                                                                                                                                                                                                                                                                                                                          &argzz.boolResult );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     call
         Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           &argzz.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          arg->flags,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            boolResult );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 recent than
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Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            set_backup_time_request(IN RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ** Purpose: Function to start the asynchronous operation of all the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 else {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* make sure no RPC is in progress */
else if (E_SUCCESS != (argzz.status = check_RPC_state( TRUE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     if (NULL == cmd_args)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cmd_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   static RE_status_result
                                                                                                                             (argzz.status != E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _set..._backup rpc functions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RE_status_result * - result of RPC function call
                                                                                                                                                                                                                      else
                                                                                                                                                                                                                                                                                                                                                                                                                                                }
else if (PushCommand( internal_command, &status) )
                                                                              if (cmd_args)
                                                                                                                                                                                                                                                                                                                                                                                                     /* log error, clean up input queue, return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (PushRpcInput( (void *)cmd_args, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cmd_args->flags = arg->flags;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      argzz.status = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           = calloc( 1, sizeof(RE_set_backup_time_args) );
                                                                                                  failure somewhere: free allocated memeory: */
                                                                                                                                                                                                                                                          argzz.status = EP_RB_RECOVER_SERVERFAIL;
clear_RPC_state();  /* indicate idle on fatals */
                                                                                                                                                                                             argzz.status = E_SUCCESS
                                                      xdr_free( xdr_RE_set_backup_time_args,
                                                                                                                                                                                                                                                                                                           PopRpcInput( (void **)&cmd_args, &status);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                argzz.status = EP_RB_RECOVER_SERVERFAIL;
clear_RPC_state( );  /* indicate idle
                                                                                                                                                                                                                                                                                                                                                                                 EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* log error, return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IN int rpc_function_no )
    ../pgms_restore/EDMRestoreEngService.c 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IN int internal_command,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* note time of last RPC */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   set_backup_time_request
                                (char *) cmd_args);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               internal_command )) )
                                                                                                                                                                                                                                                                                                                                                     status, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             status,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE
                                                                                                                                                                                                                                                                                                                                                                                     _FILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *cmd_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                indicate idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "PushRpcInput failed");
                                                                                                                                                                                                                                                                                                                                     "PushCommand failed");
                                                                                                                                                                                                                                                                                                                                                                           __LINE___, LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     __LINE_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                no
    Page 45 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 45 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fatals */
    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      set_backup_time_result( IN int internal_command,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ** Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Routine:
                                                    else if (cmd != internal_command)
{
                                                                                                                                                                                                                                                                                                                                                     /* test for completion of processing */
else if (PopResult( -1, &result, &cmd, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           int
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (outarg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               static
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /* make sure this RPC is in progress */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     static RE_status_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    set_rpc_obj( rpc_function_no, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Function to test for completion of the re_set_xxx_backup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_status_result * - result of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            set_backup_time_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       int rpc_function_no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RPC calls,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_status_result *outarg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       result, cmd, status;
                                                                                                                                                                                                                                          } else
                                                                                                                                                                                                                                                                                                           if (status == COMMAND_RECORD_GET_FAILED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 xdr_free( xdr_RE_status_result, (char *)outarg );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         free( outarg );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  internal_command
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* free last results */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          != (argzz.status
                              error,
                                                                                                                                                                                                                                                              argzz.status = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                         EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and retrieve some or all of their output
                                                                                                                                             argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                            /* just return failure status */
                                                                                                                                                                                                                /* log error, clean up, return error
ror, clean up, return error */
./pgms_restore/EDMRestoreEngService.c 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   free ( cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 set_backup_time_request
                                                                                                                                                                                                                                                                                                                                                                                                                                                  #1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NULL;
                                                                                                                                                                 __FILE__, __LINE__, LOG_ERR, status, 0, "PopResult failed");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IN int rpc_function_no
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page 46 of 172
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RE_status_result *
re_set_first_backup_1_svc(
                                                                                                                                                                                                                                                                                                                                                                                ** Return Codes:
** RE_status_result * - result of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                      ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                        ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** Routine:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /****
                           Page 47 of 172
                                                                                                                                                                                                                                                                                                                                                      Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inputs:
                                                                                                                                                                                 RE_status_result *argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             else
                                                                           return argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if (argzz.status == EP_RB_RECOVER_SERVERFAIL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                set_rpc_obj( rpc_function_no, &argzz.RPCobjID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                else if (PopRpcOutput( (void **)&outarg, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        else if (result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* return static result struct on errors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                        Function
                                                                                                                                                                                                                                                                                                                                                                                                                                           None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            re_set_first_backup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       return outarg;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       set_rpc_obj( rpc_function_no,
                                                                                                                      set_backup_time_request( arg,

COMMAND_SET_FIRST_BACKUP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* return popped results struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDMRestoreEng_logent(
../pgms_restore/EDMRestoreEngService.c 35
                                                                                                                                                                                                                                                                                                          Internal Only.
                                                                                                                                                                                                                    H
                                                                                                                                                                                                                                                                                                                                                        to
                                                                                                                                                                                                              RE_set_backup_time_args *arg,
                                                                                                                                                                                                                                                                                                                                                        select the oldest backup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ! = COMMAND_RESULT_SUCCESS!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "PopResult mismatch: got %d command, expected %d\n",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    set_backup_time_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "RPC failure in process manager thread" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MESSAGE_FAILURE_DOING_ASYNC_RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           * - args for the RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* indicate process mgr idle on fatals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cmd,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE__, __LINE__, LOG_ERR, MESSAGE_INVALID_COMMAND, 0,
                                                                                                             re_set_first_backup );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         &outarg->RPCobjID);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          internal_command);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* indicate process mgr idle */
                                                                                                                                                                                                                                                                                                                                                        for the current workitem
                                                                                                                                                                                                                 IN struct svc_req *req )
 Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOG_ERR, status,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fri Jan 04 14:40:00 2008
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 Page 48 of 172
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                                                                                                                                                                                                                                                                                                                                       RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE_status_result *
re_set_first_backup_result_1_svc( IN RE_null_args *arg,
                        ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                        ** Intended caller: Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ** Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page 48 of 172
                                                           Inputs:
                                                                                              Routine:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Return Codes:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Purpose:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Inputs:
                                                                                                                                                                                                                                   argzz = set_backup_time_request( arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            argzz = set_backup_time_result( COMMAND_SET_FIRST_BACKUP
                                                                                                                                                                                                                                                                      RE_status_result *argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          return argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_status_result *argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       backup for the current workitem
                                                           RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                              Function to set to the next
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Function to test for completion
                                                                                            re_set_next_backup_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    re_set_next_backup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_status_result * - result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                re_set_first_backup_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_status_result * - result of RPC function call
                                                                                                                                                                argzz;
 ./pgms_restore/EDMRestoreEngService.c 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_set_first_backup_result_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * - args for the RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IN struct svc_req *req )
                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *
                                                                                                                                                                                                                                                                                                                                                                                                                                                (more recent) backup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of RPC function
                                                            args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      args for
                                                                                                                                                                                                   re_set_next_backup
                                                                                                                                                                                                                    COMMAND_SET_NEXT_BACKUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_set_first_backup );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of
                                                            for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the rpc
                                                            the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RPC
                                                            RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           to select the oldest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   call
                                                           call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        call
      Fri Jan 04 14:40:00 2008
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Fri Jan 04 14:40:00 2008
                           ** Intended caller:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_set_next_backup_result_1_svc(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ** Intended caller: Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ** Return Codes:

** RE_status_result * - result of RPC function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fri Jan 04 14:40:00 2008
                                                               Purpose:
                                                                                                                       Return Codes:
                                                                                                                                                         Outputs:
                                                                                                                                                                                              Inputs:
                                                                                                                                                                                                                                    Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Return Codes:

RE_status_result * - result of RPC function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inputs:
                                                                                                                                                                                                                                                                                                                                                    RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                argzz = set_backup_time_result( COMMAND_SET_NEXT_BACKUP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           return argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RE_status_result *argzz;
                                                             Function to
                                                                                                                                                                                              RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_set_backup_time_args
                                                                                                                                                          None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Function to set to the next
                                                                                                                                                                                                                                re_set_prev_backup_result
                                                                                                 RE_status_result * - result of RPC function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            re_set_prev_backup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Function
                        Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    IN RE_set_backup_time_args *arg, IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           to set
                                                             set to
                                                                                                                                                                                                                                                                                                                                                                                                                    *argzz;
 ../pgms_restore/EDMRestoreEngService.c 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           to
                                                             the next (more recent) backup time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              re_set_next_backup_result_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IN RE_null_args *arg,
                                                                                                                                                                                                *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           next
                                                                                                                                                                                             args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (more recent) backup time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        args for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (more recent) backup time
                                                                                                                                                                                                                                                                                                                                            re_set_prev_backup );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                re_set_next_backup );
                                                                                                                                                                                              for the RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  call
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 49 of 172
Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           re_set_backup_for_time_1_svc( IN RE_backup_for_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ** Intended caller: Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ** Return Codes:
**
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ** Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_set_previous_backup_result_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ******************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Purpose:
                                                                                                                           else {
                                                                                                                                                                                                                                                                                                                                                                                if (NULL == arg)
    argzz.status =
                                                                                                                                                                                                                                                                                                                                                                                                                                       setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_backup_for_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               static RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          return argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                argzz = set_backup_time_result( COMMAND_SET_PREVIOUS_BACKUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_status_result *argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Function to set to a specified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_backup_for_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  re_set_backup_for_time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE_status_result * - result of RPC
                                                                                                                                                                                                                                                               EDMRestoreEng_logent( __FILE__, __LINE__
MESSAGE_NO_MEMORY,
                        if (PushRpcInput( (void *)cmd_args,
                                                                              cmd_args->flags = arg->flags;
                                                                                                                                                                                                             argzz.status = EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                            calloc( 1,
                                                                                                                                                                                                                                                                                                                       cmd_args)
                                                                                                                  /* just return failure status */
_pcInput( (void *)cmd_args, &status)
_/pgms_restore/EDMRestoreEngService.c 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_set_previous_backup_result_1_svc
                                                                                                                                                                                                                                                                                                                                            sizeof(RE_backup_for_time_args) );
                                                                                                                                                                                                                                                                                                                                                                                   EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                       status;
/* note time of last RPC */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IN RE_null_args *arg,
                                                                                                                                                                                                                                                  "Cannot malloc RE_get_all_backup_times_args"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           args for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            re_set_prev_backup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               backup time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *cmd_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IN struct svc_req *req )
                                                                                                                                                                                                                                                                    errno,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              call
                                                                                                                                                                                                                                                                                        LOG_ERR
Page 50 of 172
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re_set_backup_for_time_result_1_svc(
                                                                                                                                                                                                                                            RE_status_result *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ** Routine:
Page 51 of 172
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                                                                                                                                                                                                                                                                                                          Intended caller:
                                                                                                                                                                                                                                                                                                                                           Purpose:
                                                                                                                                                                                                                                                                                                                                                                                             Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                            Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inputs:
                                                                                                                                         argzz =
                                                                                                                                                                          RE_status_result *argzz;
                                                                                        return argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 set_rpc_obj( re_set_backup_for_time, &argzz.RPCobjID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if
                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (argzz.status != E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                            None
                                                                                                                                                                                                                                                                                                                                           Function
                                                                                                                                                                                                                                                                                                                                                                             RE_status_result * - result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              re_set_backup_for_time_result
                                                                                                                                        set_backup_time_result( COMMAND_SET_BACKUP_FOR_TIME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (cmd_args)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            else if (PushCommand( COMMAND_SET_BACKUP_FOR_TIME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* log
../pgms_restore/EDMRestoreEngService.c 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   failure somewhere: free allocated memeory:
                                                                                                                                                                                                                                                                                                            Internal Only.
                                                                                                                                                                                                                                                                                                                                              to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            error, clean up input queue, return error
                                                                                                                                                                                                                                                                                                                                              set
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         argzz.status = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            argzz.status = EP_RB_RECOVER_SERVERFAIL;
clear_RPC_state( ); /* indicate idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       re_set_backup_for_time_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   free ( cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDMRestoreEng_logent( __FILE__, __LINE__, status, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* log
                                                                                                                                                                                                                                                                                                                                              ťο
                                                                                                                                                                                                                                                                                                                                              the next
                                                                                                                                                                                                         IN RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               return error
                                                                                                                                                                                                                                                                                                                                                                               of RPC function
                                                                                                                                                                                                                                                                                                                                                                                                                                                              args for the
                                                                                                                                                                                                                                                                                                                                              (more
                                                                                                                       re_set_backup_for_time );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             status, 0,
                                                                                                                                                                                                                                                                                                                                              recent) backup time
                                                                                                                                                                                                         *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* indicate idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* indicate idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *
                                                                                                                                                                                                          IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "PushRpcInput failed");
                                                                                                                                                                                                                                                                                                                                                                               call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "PushCommand failed");
                                                                                                                                                                                                                                                                                                                                                                                                                                                              call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LINE__,
Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                &status) )
                 re_set_most_recent_backup_1_svc(
IN RE_set_backup_time_args *arg,
                                                                                                                                                                                             * *
* *
Page 52 of 172
                                                     RE_status_result *
                                                                                          *
                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_boolean_result * re_is_there_prev_backup_for_time_1_svc(IN RE_backup_for_time_args
                                                                                                                       ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ** Intended caller: Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 52 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  * *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ** Routine:
                                                                                                                                                        Purpose:
                                                                                                                                                                                                            Return Codes:
                                                                                                                                                                                                                                            Outputs:
                                                                                                                                                                                                                                                                             Inputs:
                                                                                                                                                                                                                                                                                                             Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Return Codes:
RE_boolean_result * -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              set_rpc_obj( re_is_there_prev_backup_for_time, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if (NULL == arg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          static RE_boolean_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ._
II
                                                                                                                                                                                                                                                                             RE_set_backup_time_args * - args for the RPC call
                                                                                                                                                                                                                                            None
                                                                                                                                                         Function to
                                                                                                                                                                                                                                                                                                             re_set_most_recent_backup
                                                                                                                                                                                          RE_status_result * - result of RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_backup_for_time_args * -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  re_is_there_prev_backup_for_time_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status = RSTSL_IsTherePrevBackupForTime( arg->time,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       argzz.status =
../pgms_restore/EDMRestoreEngService.c 40
                                                                                                                       Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_is_there_prev_backup_for_time_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to determine if there
                                                                                                                                                         set to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         we weren't idle, reject call */
                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* if not idle, trouble */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  result of
                                                                                                                                                         next
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IN struct svc_req *req
                                                                                                                                                         (more recent)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 an
                                                                                                                                                                                             function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 older backup available.
                       IN struct svc_req
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RPC
                                                                                                                                                           backup
                                                                                                                                                                                             call
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  call
  Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        &argzz.
                                                                                                                                                           time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        arg->flags,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       boolResult );
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                       *req
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** Return
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                                                                                                                                                                                                     re_get_host_platform_type_1_svc(
   Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                       RE_get_host_platform_type_result *
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                                                                                                                                                                                                                                                                                                                                         ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                       ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      re_set_most_recent_backup_result_1_svc(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ** Purpose:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u></u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ×
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ** Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inputs:
                                                                                                                                             static RE_get_host_platform_type_result argzz;
                                                                                                         setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz = set_backup_time_result( COMMAND_SET_MOST_RECENT_BACKUP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                return argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_status_result *argzz;
                                                                                                                                                                                                                                                                                                                                                                                                 Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz = set_backup_time_request( arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_status_result *argzz;
                                                                   (NULL == arg)
                                                                                                                                                                                                                                                                                                                                                                                                                                       None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                           Function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Function to set to the next
                                                                                                                                                                                                                                                                                                                                                                              RE_get_host_platform_type_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_string_args * - args for the RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   re_get_host_platform_type_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RE_status_result * - result of RPC function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_set_most_recent_backup_result
                                               argzz.status = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                           to
                                                                                                                                                                                                                                                                                                                                         retrieve the platform
   ../pgms_restore/EDMRestoreEngService.c 41
                                                                                                                                                                                  IN RE_string_args *arg, IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  re_set_most_recent_backup_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IN RE_null_args *arg, IN struct svc_req *req )
                                                                                                         /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  * - args for the RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (more recent) backup time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMAND_SET_MOST_RECENT_BACKUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_set_most_recent_backup );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          re_set_prev_backup );
                                                                                                                                                                                                                                                                                                                                      type of the
                                                                                                                                                                                                                                                                                                                                                                                result of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     call
                                                                                                         *
                                                                                                                                                                                                                                                                                                                                       specified
   Page 53 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 53 of 172
                                                                                                                                                                                                                                                                                                                                           host
   Fri Jan 04 14:40:00 2008
                                             ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_does_alternate_exist_1_svc(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_boolean_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ** Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fri Jan 04 14:40:00 2008
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                                                                                                                          Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inputs:
                                                                                                                                                                                                                       return &argzz;
                                                                                                                                                                                                                                                             set_rpc_obj( re_does_alternate_exist,
                                                                                                                                                                                                                                                                                                                                                                                else
                                                                                                                                                                                                                                                                                                                                                                                                                                                           else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      if (NULL == arg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 static RE_boolean_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              available
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           set_rpc_obj( re_get_host_platform_type, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                       .<u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ! = E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RE_does_alternate_exist_args
                                               None
                                                                                                                        re_finish_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Function to test if there is an alternate backup trailset
                                                                                   RE_null_args * - args for the RPC call (none,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_boolean_result * - result of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          re_does_alternate_exist
                                                                                                                                                                                                                                                                                                                                                                                                                      E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                            argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  argzz.status = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for the specified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* we
./pgms_restore/EDMRestoreEngService.c 42
                                                                                                                                                                                                                                                                                                                                                                                                   we weren't
                                                                                                                                                                                                                                                                                                                                                             н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IN RE_does_alternate_exist_args *arg,
IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* if not idle, trouble */
weren't idle, rejort ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_get_host_platform_type_1_svc
                                                                                                                                                                                                                                                                                                                                                             RSTSL_DoesAlternateExist( arg->topLevelObj
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RSTSL_GetHostPlatformType( arg->name, &argzz.ptype
                                                                                                                                                                                                                                                                                                                                                                                                   /* if not idle, trouble */
pren't idle, reject call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              template
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     args
                                                                                                                                                                                                                                                             &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                       FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for the
                                                                                                                                                                                                                                                                                                                                           arg->templateName
                                                                                                                                                                                                                                                                                                                      &argzz.boolResult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RPC call
   Page 54 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 54 of 172
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re_finish_1_svc(IN RE_null_args *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       在各种的条件,在各种的基础的,是是是一种的,是是是一种的,是是是一种的,是是是一种的,是是是一种的,我们的,我们的,我们的,我们的,我们的,我们的,我们的的,我们的
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 55 of 172
                                                 set_rpc_obj( re_finish,
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H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         else
                return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cmd_args = calloc( 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               static RE_status_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if (NULL == cmd_args)
                                                                                                                                                                                         (argzz.status != E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Function to terminate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_status_result * - result of RPC function
                                                                                                                                                                                                                                                           else
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                 109
                                                                                                                                                    (cmd_args) (
                                                                                                                                                                      failure somewhere:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (PushRpcInput( (void *)cmd_args, &status)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                 error, clean up input queue, return error
                                                                                                                                                                                                                                          argzz.status =
                                                                                                                                                                                                                                                                                            PopRpcInput( (void **)&cmd_args, &status);
argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                    (PushCommand( COMMAND_FINISH, &status) )
                                                                                                                    free ( cmd_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                   argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRestoreEng_logent( ___FILE__, .
status, 0,
                                                                                                                                                                                                                                                                                                                                                                 EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *cmd_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* we weren't idle, reject finish */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* log error,
                                                                                                                                     _free( xdr_RE_null_args,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     re_finish_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sizeof(RE_null_args) );
                                                 &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* if idle, stay idle */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* note time of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the restore session at the browse stage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    __FILE__, __LINE__, LOG_ERR, MESSAGE_NO_MEMORY, errno, "Cannot malloc RE_null_args" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           return error
                                                                                                                                                                          free allocated memeory:
                                                                                                                                                                                                                                           E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    struct svc_req
                                                                                                                                                                                                                                                                                                                                               status, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              last RPC
                                                                                                                                      (char *)cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMAND_NONE_ACTIVE ) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "PushRpcInput failed");
                                                                                                                                                                                                                                                                                                                                "PushCommand failed");
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                                                                                                                                                                                                                                                                                                                                                                   LOG_ERR
                                                                                                                                                                                                        re_get_marked_total_size_1_svc(IN
                                                                                                                                                                                                                           RE_get_marked_total_size_result *
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                                                                                                                                                                                                                                                                                ** Intended caller: Internal Only.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              re_ping_1_svc(IN RE_null_args *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_status_result
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                static RE_status_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   argzz.status = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                  Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                      Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                        Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Routine:
                                               if ( (argzz.status = check_RPC_state( FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                        setLastRpcTime();
else
                                                                                    argzz.total.low
                                                                                                     argzz.total.high = 0;
                                                                                                                                                                        static RE_get_marked_total_size_result argzz;
                                                                                                                                                                                                                                                                                                                                   for restore
                                   11
                                                                                                                                                                                                                                                                                                                                                    Function to return the total
                                                                                                                                                                                                                                                                                                                                                                                                                                        None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           re_get_marked_total_size
                                                                                                                                                                                                                                                                                                                                                                                    RE_get_marked_total_size_result * -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_ping_1
                                E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RE_status_result * - result of RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    to
                                                                                     11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    keep
                   *
                                                                                     0;
                  we
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             args for the RPC call (none)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           args for the
                weren't
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_ping_1_svc
                                /* if not idle,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           time of
                                                                                                                                                                                                           RE_null_args *arg, IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      engine alive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NI
                                                                                                                                        note time of last RPC */
         not idle, trouble */
idle, reject call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                struct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           last
                                                                                                                                                                                                                                                                                                                                                       Size
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RPC call (none)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                svc_req
                                                                                                                                                                                                                                                                                                                                                     of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         function call
                                                                                                                                                                                                                                                                                                                                                                                        result of RPC function call
                                                                                                                                                                                                                                                                                                                                                     the objects currently marked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *req
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fri Jan 04 14:40:00 2008
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Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_is_object_marked_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ** Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       return
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            set_rpc_obj( re_get_marked_total_size,
                                                                                                         else {
                                                                                                                                                                                                                                                                  else if (NULL ==
                                                                                                                                                                                                                                                                                                                                        else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                   ħ.
                                                                                                                                                                                                                                                                                                                                                                                                                                         argzz.marked.marked_val = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          argzz.marked.marked_len = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              argzz.numMarked = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ħ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            static marked_len
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               static RE_is_object_marked_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* init result structure
                                                                                                                                                                                                                                                                                                         (NULL == arg | NULL == arg->objList | arg->numEntries
argzz.status = EP_RB_RECOVER_BAD_ARGS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (marked_len) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                free previosly calloc's bool array */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Function to determine if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               None
                                                                                                                                                                                                                                                                                                        E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RE_is_object_marked_result * - result of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RE_is_object_marked_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           re_is_object_marked_1
                                                              argzz.marked.marked_len = marked_len = arg->numEntries;
argzz.status = RSTSL_IsObjectMarked( arg->numEntries,
                                                                                                                                                argzz.status =
                                                                                                                                                                                                     EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        marked_len = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          free( argzz.marked.marked_val );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        argzz.total = RSTSL_GetMarkedTotalSize( );
argzz.status = E_SUCCESS;
                                                                                                                                                                                                                                                                (argzz.marked.marked_val =
   ../pgms_restore/EDMRestoreEngService.c 45
                                                                                                                                                                                                                                                                                   we weren't idle, reject call */
                                                                                                                                             "Cannot malloc bool_t array" );
EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    re_get_marked_total_size_1_svc
                                                                                                                                                                                                                                          calloc( arg->numEntries, sizeof(bool_t) )) )
                                                                                                                                                                                                                                                                                                  /* if not idle, trouble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              specified object is
                                                                                                                                                                                  MESSAGE_NO_MEMORY, errno,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for the RPC call
                                                                                                                                                                                                                                                                                                                       FALSE, COMMAND_NONE_ACTIVE ))
                                               arg->objList,
                           &argzz.numMarked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               marked for restore
                                                                                                                                                                                                       LOG_ERR
   Page 57 of 172
                                                                                                                                                                                                                                                                                                                                                                                                     ٨
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 57 of 172
                                                                                                                                                                                                                                                                                                                                                                                                   9
                                               *
                                                                                                         *
                                                                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_is_object_markable_result *
re_is_object_markable_1_svc(IN RE_is_object_markable_args
IN struct svc_req *req)
                                                                                                                                                                                                                                                                    ** Intended caller: Internal Only.
   Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fri Jan 04 14:40:00 2008
                                            Purpose:
                                                                                                      Return Codes:
                                                                                                                                             Outputs:
                                                                                                                                                                                Inputs:
                                                                                                                                                                                                                         Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Routine:
                                                                                                                                                                                                                                                                                                                                                           set_rpc_obj( re_is_object_markable, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz.markable = FALSE; if (NULL == arg || Numr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 static RE_is_object_markable_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           set_rpc_obj( re_is_object_marked,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ï
                                            Function to search for restorable objects in the backup catalog
                                                                                                                                             None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (NULL == arg || NULL
                                                                                                                                                                                                                        re_find_restorable_objects_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RE_is_object_markable_args
                                                                                                                                                                                RE_find_restorable_objects_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Function to test if the
                                                                                 RE_find_restorable_objects_result * -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_is_object_markable_result * -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_is_object_markable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                    argzz.markable =
argzz.status = E_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               argzz.status = EP_RB_RECOVER_BAD_ARGS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* we weren't
./pgms_restore/EDMRestoreEngService.c 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* if not idle, trouble */
ren't idle, reject call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   == arg->thisObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                      _SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                       RSTSL_IsObjectMarkable( arg->thisObject );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 re_is_object_marked_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              specified object is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         &argzz.RPCobjID
                                                                                                                                                                                    *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              reject call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  args for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      result of RPC function
                                                                                                                                                                                args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FALSE, COMMAND_NONE_ACTIVE ))
                                                                                   result of RPC function call
                                                                                                                                                                                  for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      argzz.marked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 markable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    call
                                                                                                                                                                                  RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 marked_val );
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 58 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      call
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_find_restorable_objects_result *
re_find_restorable_objects_l_svc( IN RE_find_restorable_objects_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                **************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 59 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            else if ( (argzz.status = check_RPC_state( TRUE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* make
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if (NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cmd_args = calloc( 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_find_restorable_objects_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    static RE_find_restorable_objects_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ! = E_SUCCESS )
                                                                                                                    (argzz.status != E_SUCCESS)
                                                                                                                                                                                                          }
else
                                                                                                                                                                                                                                                                                                                                                                                                                                             }
else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sure no rpc is in progress */
                                                                      if (cmd_args)
                                                                                               /* failure somewhere: free allocated memeory: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           if (PushRpcInput( (void *)cmd_args, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     arg->searchCriteria = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cmd_args->searchCriteria = arg->searchCriteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ClearRpcCancelFlag( );
ClearProgressValue( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             argzz.status = EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    == cmd_args)
 ./pgms_restore/EDMRestoreEngService.c 47
                                                                                                                                                                                                                                                                                                                                                                              Pot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                               i f
                                                                                                                                                                                                                                                                                                                                                                            error, clean up input queue, return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            re_find_restorable_objects_1_svc
                                                                                                                                                                                                                                                  argzz.status = EP_RB_RECOVER_SERVERFAIL;
clear_RPC_state();  /* indicate idle
                                                                                                                                                                                   argzz.status =
                                                                                                                                                                                                                                                                                                                                                                                                                                             (PushCommand(
                                                 xdr_free( xdr_RE_find_restorable_objects_args,
                                                                                                                                                                                                                                                                                          PopRpcInput( (void **)&cmd_args, &status);
                                                                                                                                                                                                                                                                                                                                                       EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status = EP_RB_RECOVER_SERVERFAIL;
clear_RPC_state();  /* indicate idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* log error, return error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sizeof (RE_find_restorable_objects_args) );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Cannot malloc RE_find_restorable_objects_args"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                        COMMAND_FIND_RESTORABLE_OBJECTS, &status) )
                              (char *)cmd_args );
                                                                                                                                                                                   E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* reset cancel flag */
/* reset progress count
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMAND_FIND_RESTORABLE_OBJECTS
                                                                                                                                                                                                                                                                                                                                    status, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      status, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* indicate idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         to avoid 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "PushRpcInput failed");
                                                                                                                                                                                                                                                                                                               "PushCommand failed");
                                                                                                                                                                                                                                                                                                                                                   ___LINE___, LOG_ERR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           __LINE_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *cmd_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOG_ERR
 Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                    idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           frees
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *
                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOG_ERR
                                                                                                                                                                                                                                                    fatals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          re_get_find_results_1_svc(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_get_find_results_result *
 Page 60 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ** Purpose: Function to retrieve the results
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ** Intended caller: Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 60 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         set_rpc_obj( re_find_restorable_objects,
                                                                                                                                                                                                                                                                                                                                                                                                                          argzz.foundObjs =
                                                                                                                                                                                                                                                                                                                                                                                                                                               argzz.cookie = arg->cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.numEntries = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                int
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE_find_restorable_objects_result
static RSTRPC_found_obj_list
                                                                                                                                                                                                                                                                                                                                                       if (arg->interrupt)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (last_list)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      setLastRpcTime();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         static RE_get_find_results_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     request
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* init static output struct
                                                                                                                                                                                                                                                                                                                                                                          If interrupt was requested,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_get_find_results_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RE_get_find_results_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       re_get_find_results
                                                   else if (PopResult( 1,
                                                                                                                                                                                                          `*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              xdr_free( xdr_RSTRPC_found_obj_list, (char *)last_list );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                result, cmd, status;
                                                                  /* test for completion of find processing: */
                                                                                                                                                                                                                                 *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           last_list = NULL;
                                                                                                                                         /* status = E_SUCCESS means call only GetFindResults
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* free last results */
../pgms_restore/EDMRestoreEngService.c 48
                                                                                                                                                                                 find not active -- make sure idle */
argzz.status = check_RPC_state (
                                                                                                                                                                                                                                                                                          (E_SUCCESS != (argzz.status check_RPC_state(
                                                                                                                                                                                                                             for get find results after first good get results call:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IN RE_get_find_results_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              re_find_restorable_objects_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   free ( cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                            NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* note time
                                                                                                                                                                                                                                                                       FALSE, COMMAND_FIND_RESTORABLE_OBJECTS )))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *
                                                                                                                                                                                                                                                                                                                                                                                  make sure find
                                                     &result, &cmd, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             &argzz.RPCobjID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for the RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *arg, IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *outarg = NULL;
*last_list = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the find_restorable objects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 argzz;
                                                                                                                                                          FALSE, COMMAND_NONE_ACTIVE);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RPC function call
                                                                                                                                                                                                                                                                                                                                                                                   was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                   running
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                call
 Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fri Jan 04 14:40:00 2008
```

```
Fri Jan 04 14:40:00 2008
```

if (status

re_get_find_results_1_svc

== COMMAND_RECORD_GET_FAILED)

SetRpcCancelFlag();
if (PopResult(MAX C.)

(PopResult (MAX_CANCEL_WAIT_SECS, &result,

&cmd, &status))

"PopResult mismatch: got %d command

___FILE__, __LINE__, LOG_ERR MESSAGE_INVALID_COMMAND, 0,

if (EP_RB_RECOVER_FIND_INTERRUPTED == argzz.status)

/* for get find results after first g
else if (E_SUCCESS != (argzz.status =

check_RPC_state(FALSE, COMMAND_NONE_ACTIVE)))

/* another cmd running, inavlid */

find results after first get find results call

argzz.status = EP_RB_RECOVER_FIND_INTERRUPTED;

argzz.status = EP_RB_RECOVER_SERVERFAIL;

status, 0,

FILE

LINE_,

/* for

else

/* popped result, validate and pop output: */
if (cmd != COMMAND_FIND_RESTORABLE_OBJECTS)

EDMRestoreEng_logent(

/* log error, clean up, return error */

Fri Jan 04 14:40:00 2008

```
/* argzz.status = E_SUCCESS means call only GetFindResults */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              was doing find, test for completion of processing: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* still going: signal cancel, wait till done */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pop worked: indicate results need popping
*/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FALSE, COMMAND_FIND_RESTORABLE_OBJECTS )))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "PopResult failed");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "PopResult failed");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 __LINE__, LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 61 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                    *
  Fri Jan 04 14:40:00 2008
                                                    ** Outputs:
                                                                                                                                                        ** Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                            Inputs:
                                                                                                                                                                                                                                                                                                   return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                  if (argzz.status == EP_RB_RECOVER_SERVERFAIL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                 set_rpc_obj( re_get_find_results, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if ( E_SUCCESS == argzz.status
|| EP_RB_RECOVER_FIND_INTERRUPTED == argzz.status
                                                                                                                                                                                                                                                     /* end of: re_get_find_results */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* return static results struct */
                                                                                                       RE_tlo_query_args
                                                           none
                                                                                                                                                      re_is_object_searchable
                                                                                                                                                                                                                                                                                                                                                                         clear_RPC_state();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* canceled or done, get some data or free it */
argzz.status = RSTSL_GetFindResults( arg->interrupt,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                last_list = argzz.foundObjs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   else
{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    else if (PopRpcOutput( (void **)&outarg, &status) | (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     else if (result != COMMAND_RESULT_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 __FILE__, __LINE__, LOG_ERR,
0, "PopRpcOutput failure");
argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMAND_FIND_RESTORABLE_OBJECTS); argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          outarg = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              xdr_free( xdr_RE_find_restorable_objects_result.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     argzz.status = outarg->status; /* get real status
/* free results */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 free( outarg );
../pgms_restore/EDMRestoreEngService.c 50
                                                                                                       * - args for the RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           re_get_find_results_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (char *)outarg );
                                                                                                                                                                                                                                                                                                                                                    /* indicate process mgr idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* indicate process mgr idle */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        &argzz.foundObjs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       &argzz.cookie );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            &argzz.numEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 arg->maxEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOG_ERR, status,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expected %d\n",
    Page 62 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 62 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (outarg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
```

else

/* didn't interrupt -- see if still running: */

(E_SUCCESS == (argzz.status

check_RPC_state(

(PopResult(1, &result, &cmd, &status))

(status == COMMAND_RECORD_GET_FAILED)

/* not done yet */

argzz.numEntries = ReadProgressValue();
argzz.status = EP_RB_RECOVER_RPC_INCOMPLETE;

i f

else

/* log error, clean up, return error */
EDMRestoreEng_logent(

else

else {

EDMRestoreEng_logent(

/* log pop error, clean up, return error

*

argzz.status =

/* indicate canceled anyway */
argzz.status = EP_RB_RECOVER_FIND_INTERRUPTED;

argzz.status = EP_RB_RECOVER_SERVERFAIL;

status,

Ó

FILE__,

```
re_get_backup_times_support_1_svc( IN RE_tlo_query_args *arg, IN struct svc_req *req)
                                                                                                                                                                              RE_boolean_result
                                                                                                                                                                                                                                              ** Intended caller: Internal Only.
                                                                                                                                                                                                                                                                                                     * *
* *
                                                                                                                                                                                                                                                                                                                                                            * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                 *
                                                                                                                                                                                                                                                                                                                                                                                                                  *
                                                                                                                                                                                                                                                                                                                                                                                                                                       * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          re_is_object_searchable_1_svc(IN RE_tlo_query_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_boolean_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 63 of 172
                                                                                                                                                                                                                                                                                                                                              Return Codes:
RE_boolean_result
                                                                                                                                                                                                                                                                                                                    Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                               Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Return Codes:
RE_boolean_result
argzz.boolResult = FALSE;
if (NULL == arg | NULL =
                                                                                              static RE_boolean_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       else
                                                            setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   set_rpc_obj( re_is_object_searchable, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              argzz.boolResult = FALSE;
if (NULL == arg | | NULL == arg->topLevelObj)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                static RE_boolean_result argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ! = E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_tlo_query_args
                                                                                                                                                                                                                                                                                                             Function to test if the
                                                                                                                                                                                                                                                                                                                                                                                                               none
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          re_get_backup_times_support
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Function to test if the specified object supports the
                                                                                                                                                                                                                                                                                                 multiple backup times
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        argzz.status = EP_RB_RECOVER_BAD_ARGS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          argzz.status = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   argzz.boolResult = RSTSL_IsObjectSearchable(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 re_is_object_searchable_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IN struct svc_req *req )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* we weren't idle, reject call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                   - args for the RPC call
                                                            /* note time of last RPC */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* if not idle, trouble
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* note time of last RPC
                                                                                                                                                                                                                                                                                                                  specified object supports
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  arg->topLevelObj );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                    restores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              find
                                                                                                                                                                                                                                                                                                                      from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              api
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RE_boolean_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 64 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Return Codes:
RE_boolean_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inputs:
                                                                                                                                                                                                                                         else
                                                                                                                                                                                                                                                                                                                                                                              ž£
                                                                                                                                                                                                                                                                                                                                                                                                argzz.boolResult = FALSE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             static RE_boolean_result argzz;
                                                            return &argzz
                                                                                                set_rpc_obj( re_get_symm_restore_option, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                  else if ( (argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                                       setLastRpcTime( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  set_rpc_obj( re_get_backup_times_support, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   else if
                                                                                                                                                                                                                                                                                11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ii
                                                                                                                                                                                                                                                                                                                                                            (NULL == arg | | NULL == arg->topLevelObj)
argzz.status = EP_RB_RECOVER_BAD_ARGS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_tlo_query_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Function to test if the through the Symum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_get_symm_restore_option
                                                                                                                                                                                                                                                                              E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E_SUCCESS)
                                                                                                                                                                                                 argzz.boolResult = RSTSL_GetSymmRestoreOption
                                                                                                                                                            argzz.status =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ( (argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  argzz.boolResult = RSTSL_GetBackupTimesSupport
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         argzz.status =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  re_get_backup_times_support_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FALSE, COMMAND_NONE_ACTIVE ))

/* if not idle, trouble */

/* we weren't idle, reject call */
                                                                                                                                                                                                                                                            we weren't idle, reject call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    * - args for the RPC call
                                                                                                                                                             E_SUCCESS
                                                                                                                                                                                                                                                                                                                        = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EP_RB_RECOVER_BAD_ARGS;
                                                                                                                                                                                                                                                                              /* if not idle, trouble */
                                                                                                                                                                                                                                                                                                                                                                                                                                         /* note time of last RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 specified object supports restores
                                                                                                                                                                                                                                                                                                     FALSE, COMMAND_NONE_ACTIVE ))
                                                                                                                                                                              (arg->topLevelObj);
                                                                                                                                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (arg->topLevelObj);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fri Jan 04 14:40:00 2008
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NULL == arg->topLevelObj)

```
static RE_errno_ty check_RPC_state( boolean_ty set, int cmd )
                                                                                                                                                                                                                     *
                                                                                                                                                                                                                                     *
  Fri Jan 04 14:40:00 2008
                                                                                                                      *
                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                    * *
                                                                                                                                                                                                                                                                                      *
                                                                                                                                                                                                                                                                                                ** Outputs:
                                                                                                                                                                                                                                                                                                                   * *
* *
                                                                                                                                                                                                                                                                                                                                                                   * * *
                                                                                                                                                                                                                                                                                                                                                                                                                                 * * *
* * *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        static void set_rpc_obj( ulong rpc_id,
{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * * *
* * *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ** Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                    Return
                                                                                                                                                                                   Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Routine: check_RPC_state
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Routine:
                   if ( !set && cmd != current_rpc_cmd)
| (set && current_rpc_cmd != COMMAND_NONE_ACTIVE) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Function to check if there is any current command, or if it is set to a specific value, and optionally, to set it to a new command value
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gettimeofday( &timeofday, dummy );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         void *dummy = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           return;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc_objID->time = timeofday.tv_sec;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpc_objID->rpc_type = rpc_id;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        struct timeval timeofday;
                                                                                                                                                                                                                                                                    Codes:
                                                                                                                                                                                   verify that no async RPC
                                                                                                                                                                                                                                                                                                   None
                                                                                                                                                                                                                                                  RE_errno_ty result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bool set
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              load rpc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           none
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpc_id
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         set_rpc_obj
                                                                                                                                                                                                                                                                                                                                                                                                                              int
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc_objID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cmd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         object id with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pointer to RPC object
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpc function number
  ../pgms_restore/EDMRestoreEngService.c 53
                                                                                                                                                                                                                                                                                                                                 í.e.,
                                                                                                                                                                                                                                                                                                                                                                                                                              if set input is 0/false,
                                                                                                                                                                                                                                                                                                                                                                                                                                                             current command (1/true), or
                                                                                                                                                                                                                                                                                                                                                                                               for (COMMAND_NONE_ACTIVE means idle)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           indicates whether this is a request
                                                                                                                                                                                                                                 result of check: E_SUCCESS if current command was in desired state;
                                                                                                                                                                                                                  EP_RB_RECOVER_INVALOP otherwise
                                                                                                                                                                                   is actice,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc number
                                                                                                                                                                                                                                                                                                                                  that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_rpc_objID *rpc_objID )
                                                                                                                                                                                                                                                                                                                                                                                 is 1/true,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              set_rpc_obj
                                                                                                                                                                                                                                                                                                                                                after verifying that is it not set
                                                                                                                                                                                                                                                                                                                                 it is set to
                                                                                                                                                                     ZO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and timestamp
                                                                                                                                                                    that specified one IS active
                                                                                                                                                                                                                                                                                                                                                                               value to change current
                                                                                                                                                                                                                                                                                                                                                                                                               command value
                                                                                                                                                                                                                                                                                                                                 COMMAND_NONE_ACTIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            the just to check it
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Page 65 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            to set
                                                                                                                                                                                                                                                                                                                                                                                                               to check
  Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                  re_load_recx_directives_1_svc( IN RE_recx_file_info *arg,
                                                                                                                                                                                                                                                RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *
                                                                                                                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             static void clear_RPC_state(
                                                                                                                                                                                                                                                                                                                 ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /********
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** Intended caller:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ** Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ** Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Purpose:
                                                                                                                                                                                                                                                                                                                                                                                               Outputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                              Inputs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Routine:
                                                                                                                                                                  RSTRPC_recx_file_info
                                                                                                                                                   RSTRPC_recx_file_info
                                                     if (NULL == cmd_args)
                                                                                                                                                                                static RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            current_rpc_cmd = COMMAND_NONE_ACTIVE;
                                                                                    fileinfo = &arg->fileinfo;
                                                                                                                  cmd_args = calloc( 1, sizeof( RSTRPC_recx_file_info) );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       else {
                                                                                                                                                                                                                                                                                                                                                                                               RE_status_result * - result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             re_load_recx_directives
                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_recx_file_info
                                                                                                                                                                                                                                                                                                                                                                 Function to load the recx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           indicate that no async RPC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            None
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           none
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clear_RPC_state
                      EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                  context
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       return E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return EP_RB_RECOVER_INVALOP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* check succeeded,
                                                                                                                                                                                                                                                                                                                   Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     check-only failure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          clear the current RPC command
                                                                                                                                                                                                                                                                                                                                                  structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             none
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      current_rpc_cmd
./pgms_restore/EDMRestoreEngService.c 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 void )
                                                                                                                                                                                                                                                                                                                                                                                                                                              * - args for the RPC call to get
                                                                                                                                                                                                                 struct svc_req *req
                                                                                                                                                                    *fileinfo;
                                                                                                                                                   *cmd_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           check_RPC_state
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     change current
                                                                                                                                                                                                                                                                                                                                                                   file
                                                                                                                                                                                                                                                                                                                                                                                                of RPC function call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2,
                        FILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     can't
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               active
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cmd;
                                                                                                                                                                                                                                                                                                                                                                   into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     set
                                                                                                                                                                                                                                                                                                                                                                   the recx struct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              indicate process mgr idle */
                        LINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cmd if requested */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    because
                      LOG_ERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   another RPC busy
                                                                                                                                                                                                                                                                                                                                                                                                                                                 directives
                                                                                                                                                                                                                                                                                                                                                                   and
  Page 66 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Page 66 of 172
                                                                                                                                                                                                                                                                                                                                                                   then
                                                                                                                                                                                                                                                                                                                                                                                                                                 file
```

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*
                                                                                                                                                  *
                                                                                                                                                                            *
*
                                                                                                                                                                                            *
                                                    ** Purpose:
Page 67 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page 67 of 172
                                                                                                  Outputs:
                                                                                                                                              Inputs:
                                                                                                                                                                                              Routine:
                                                                                                                                                                                                                                                                                                                                                    set_rpc_obj( re_poll_load_recx_directives, &argzz.RPCobjID );
                                                                                                                                                                                                                                                                                                          return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               else if ( (argzz.status = check_RPC_state( TRUE, commanD_LOAD_RECX_DIRECTIVES )) != E_SUCCESS )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* make sure no rpc is in progress */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (argzz.status != E_SUCCESS)
/* failure somewhere: free allocated memeory:
                          Function to test for completion of the previously started RE_load_recx_directives operation.
                                                                                                  RE_status_result
                                                                                                                                                                                            re_poll_load_recx_directives_1_svc
                                                                                                                                              RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           i f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  else if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cmd_args->hostname = esl_strdup( fileinfo->hostname );
cmd_args->filename = esl_strdup( fileinfo->filename );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ClearRpcCancelFlag( );
ClearProgressValue( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (PushRpcInput( (void *)cmd_args, &status) )
../pgms_restore/EDMRestoreEngService.c 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (cmd_args) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             error, clean up input queue, return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Cannot malloc RE_recx_file_info structure" );
status = EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PushCommand(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        argzz.status = EP_RB_RECOVER_SERVERFAIL;
clear_RPC_state();  /* indicate idle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   xdr_free( xdr_RE_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             argzz.status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         clear_RPC_state( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PopRpcInput( (void **)&cmd_args, &status);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRestoreEng_logent( __FILE__, status, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRestoreEng_logent( __FILE__, __LINE__, LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     re_load_recx_directives_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                            tree( cmd_args );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* log error, return error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMAND_LOAD_RECX_DIRECTIVES, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MESSAGE_NO_MEMORY, errno,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* reset cancel flag */
/* reset progress count */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _recx_file_info, (char *)cmd_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              status, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* indicate idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* indicate idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "PushRpcInput failed");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "PushCommand failed");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       __LINE__, LOG_ERR,
Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fri Jan 04 14:40:00 2008
  Page 68 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_status_result *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page 68 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ** Intended caller:
                                                                                                                            else
{
                                                                                                                                                                                                                                                                                                          else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* test for completion of processing: later use real flag */ else if (PopResult( -1, &result, &cmd, &status) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      static RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       if (argzz.status != E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* make sure submit is in progress
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        if (outarg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ! = E_SUCCESS )
                                                                                                                                                  if (PopRpcOutput( (void **)&outarg, &status)
                                                                                                                                                                                                                                                                                                              if (result != COMMAND_RESULT_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ı.f
                                                                                                                                                                                                                                                              EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (cmd != COMMAND_LOAD_RECX_DIRECTIVES)
                                                                                                                                                                                                                                                                                                                                                      argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             else
                                                    argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                          argzz.status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           if (status == COMMAND_RECORD_GET_FAILED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      result, cmd, status;
                                                                                                  EDMRestoreEng_logent( ___FILE___,
                                                                                                                                                                                                                                                                                                                                                                                                                                                  EDMRestoreEng_logent(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                outarg = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          xdr_free( xdr_RE_status_result, (char *)outarg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        free( outarg );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* log error, clean up, return error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* free last results */
  ./pgms_restore/EDMRestoreEngService.c 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Internal Only.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_poll_load_recx_directives_1_svc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           argzz.status = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* fall thru to error return logic
                                                                                                                                                                                                                                                                                                                                                                                                    "PopResult mismatch: got %d command, expected %d\n",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* just return failure status */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     error, clean up, return error
                                                                                                                                                                                                                FALSE, COMMAND_LOAD_RECX_DIRECTIVES
                                                                                                                                                                                                                                                                                                                                                                                                                            __FILE__, __LINE__, LOG_ERR, 
MESSAGE_INVALID_COMMAND, 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *outarg
                                                                              "PopRpcOutput failure");
                                                                                                                                                                                                                                                                                                                                                                                  COMMAND_LOAD_RECX_DIRECTIVES);
                                                                                                      LINE__,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOG_ERR,
    Fri Jan 04 14:40:00 2008
                                                                                                      LOG_ERR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
                                                                                                        status
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```
re_get_catalog_info_1_svc( IN RE_time *arg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_catalog_info *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Return Codes: (Stored in argzz.status)
EP_RB_RECOVER_RPC_FAIL -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OutPuts:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This routine returns the level structure with the level for backup being restored
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_get_catalog_info:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE_time *arg
                                                                                                                                                                                                                                                                                                                                                                                                              NULL == arg)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      static RE_catalog_info
                                                                                                                                                                                                           else {
                                                                                                                                                                                                                                                                                                                    else if ( (argzz.status = check_RPC_state(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          return &argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              set_rpc_obj( re_poll_load_recx_directives, &argzz.RPCobjID
if (argzz.status == EP_RB_RECOVER_SERVERFAIL)
    clear_RPC_state( );
                                                                                                                                                                                                                                                                   ! = E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE\_catalog\_info Struct containing The level of the backup, the number of records, and the catalog type for the backup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       being restored
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 return outarg;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               clear_RPC_state( );
                                                                                                         /*we are ok to run an RPC :) */
/* Call the Function to get the catalog info and place
* its result in the status of the return struct.
* this call should fill in the required fields
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP_RB_RECOVER_INVALOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E_SUCCESS
                                                      argzz.status = RSTSL_get_catalog_info( arg->backupTime
                                                                                                                                                                                                                                                                                                                                                                               'y we need the input to continue, so if none passed in */
argzz.status = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (I) Time of the backup that is beeing looked at
                                                                                                                                                                                                                                  /* we weren't idle, reject call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IN struct svc_req *req )
                                                                                                                                                                                                                                                            /* if RPC not idle, trouble */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   argzz;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* indicate process mgr idle on fatals */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       argument was NULL
- if rpc call completed successfully
- if another RPC is running
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* variable to return to RPC caller*/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            check_rpc_state
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if rpc call failed because the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      this result is gotten from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* indicate process mgr idle */
                                                                                                                                                                                                                                                                                             FALSE, COMMAND_NONE_ACTIVE ))
&argzz.numrec,
```

&argzz.catType);

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```
#include <RSTinterns.h>
                                                  #include <RSTsup_csm.h>
                                                                                                                                                                          #include <eb/eb_port.h>
#include <eb/rb_log.h>
                                                                                                                                                                                                                                                                                                                     #include <pwd.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             static char RCS_id [] = "$RCSfile$ "
                                                                                                                                                                                                                                                                                                                                                                                                                         #define
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #endif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #ifndef lint
       Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* The following provides an RCS id in the binary that can be located ** with the what(1) utility. The intent is to keep this short.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ** Compile-Time Options:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *
                                                                                                                                                                                                                                        * Epoch headers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 * The following is required for code that uses POSIX API's. * Remove for non-POSIX, non-portable code.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *
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* *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  * *
* *
                                                                                                                  * Local headers
                                                                                                                                                                                                                                                                                                                                                              * System headers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * Standard defines required to turn on OS features go here.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ** File Name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Feature test switches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Table of Contents:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                      _POSIX_SOURCE 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Internal Functions:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            API Functions:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (c) 1998,1999 by EMC Corporation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This section must list any compile time definitions which will affect this header.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RSTinitfin.c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRST_Finish
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDMRST_Initialize
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This module contains the Restore API functions to initialize and terminate the restore operation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "$Revision$ "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "$Date$" ;
       RSTinitfin.c 1
Page 73 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 73 of 172
 Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #include <restore/csc_EDMRestoreEng.h>
#include <restore/dispatch_daemon.h>
#include <restore/restore_engine.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #include <edmlink/edmlink_api.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #include <restore/csc_EDMDispatch.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 * Global declarations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   * #defines, structures, typedefs local to this source file
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        * Comms headers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         internalHandlePtr handlePtr = NULL;
   Page 74 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page 74 of 172
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RSTinitfin.c 2

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#endif
Page 75 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #define
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #ifdef DEBUG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_Initialize ( hostname_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 75 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ********
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDMRST_Initialize:
                                                                                                                                                                                                                                                                                        ŗ.
                                                                                                                                                                                                                                                                                                                                    memset(&if_spec,0,sizeof(rpc_if_handle_t));
memset(&re_if_spec,0,sizeof(rpc_if_handle_t));
                                                                                                                                                                                                                                                                                                                                                                                                               end_time += timeout;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DD_getservicestatus_args statargs;
DD_initialize_result *initres = NULL;
DD_getservicestatus_result *statres =
                                                                                                                                                                                                                                                                                                                                                                                                                                   time( &end_time );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rpc_if_handle_t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DD_initialize_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     error_status_t status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    svrHd1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      session. This must be called prior to any of the other functions in the Recover API.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   timeout
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hostname
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This function takes
                                                                                                                                                                                                                                   return( EP_RB_RECOVER_BAD_ARGS
                                                                                                                                                          rec_api_log_begin( "edmrestore_api" );
                            pw = getpwuid( human_uid );
                                                         human_uid = getuid();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           struct timeval
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RPC_TIMEOUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpc_if_handle_t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              struct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     eerrno_ty api_status = E_SUCCESS;
                                                                               /* get user name to pass to DD and RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            time_t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpc_binding_handle_t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_initialize_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (O)
(I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          passwd *pw;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *human_uidname
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human_uid;
                                                                                                                                                                                                                                                                                      NULL | | hostname ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unsigned long timeout
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            - The machine name of the server to use.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A handle to receive a pointer to this user's client
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The maximum number of seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             handle for the Restore Engine connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           to the Restore Engine process to be completed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           care of all the initialization for a recovery
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3600
                                                                                                                                                                                                                                                                                                                                                                                                                                     /* compute time to give up waiting */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpc_timeout;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if_spec;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 initargs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRST_Initialize
RSTinitfin.c3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               re_handle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              end_time;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *re_init_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hostname,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_init_args;
                                                                                                                                                                                                                                                                                          NULL )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       re_if_spec;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NULL;
                                                                                      *
                                                                                                                                  /* init logs, ignore errs?? */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     to wait for the connection
Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 76 of 172
                                                                                                                                                                                                                                                                                                                                                                                           #ifdef DEBUG
Page 76 of 172
                                                                                                                                                                                                                                                                                                                                                                 increase rpc timeout during debugging */
                                                                                                                                                                                                                                                                                                          rpc_timeout.tv_sec = RPC_TIMEOUT;
rpc_timeout.tv_usec = 0;
                                                                                                            initargs.timeout = timeout;
                                                                                                                                    initargs.username = human_uidname;
                                                                                                                                                            initargs.hostname = hostname;
                                                                                                                                                                              initargs.service = DD_SERVICE_RESTORE;
                                                                                                                                                                                                                                                                                          clnt_control( handlePtr->dd_binding_handle, CLSET_TIMEOUT
                                                                                                                                                                                                                                                                                                                                                                                                                                            errno = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        if ((status != error_status_ok) || (retval ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*
** Find out if we got csc handle and see if status is bad.
** error_status_ok is a macro defined in cscomm.h.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   retval = csc_get_handle((unsigned char *) hostname
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** it will just give back the previously resolved binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** csc_get_handle will resolve and store the binding.
                                                           initres =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLIENT_IFSPEC(if_spec);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        handlePtr =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ** handle to the host.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* Arrive at a server binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* Use this macro to setup the interface spec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                return EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      if ( errno == 0 )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ever use csc_get_handle to talk to the same host again,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Arrive at a server binding. Note that if they didn't give us a valid host parameter, this will fail and drop through and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This call will get and store a fully resolved binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                return NULL in the end.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            errno = ( strerror( status ) ? status : ETIME );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human_uidname = pw->pw_name;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     If errno not set, use status if it is a valid errno value
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           if (pw == NULL | | NULL == pw->pw_name )
                                                       dd_initialize_1( &initargs, handlePtr ->
                            /* Will have _1 for RPC call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (internalHandle *) calloc(1, sizeof(internalHandle));
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rec_api_log_csm(SUB_CSM_USER_NOT_IN_PASSWD, NULL);
return(EP_RB_RECOVER_PERMISSION_DENIED);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* Trouble.
                                                                                                                                                                                                                                                             (char *)&rpc_timeout );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "failure finding edmdispd to start restore engine"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The first time we ever call the host,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        &status);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SERVER_GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 &handlePtr ->
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDMRST_Initialize
  RSTinitfin.c 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dd_binding_handle,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                             dd_binding_handle );
      Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fri Jan 04 14:40:00 2008
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\*
                                                                                                                                                                           /* Restore Engine FUNCTIONALITY BEGINS HERE */
        Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ~ if
                                                                                                                                                                                                                                                                  xdr_free( xdr_DD_getservicestatus_result, (char *)statres );
                                                                                                                                                                                                                                                                                                                                                              memcpy( handlePtr -> opaque128,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        while (statres -> status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      statargs.service_handle = initres
statargs.status = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (statres == NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           statres =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΞÉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (statres
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "failure getting status from edmdispd while starting restore engine" );
                                                                               retval = csc_private_ifspec_init(
                                                                                                                                                                                                                                                                                                                                                                                                                                   return EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        μĖ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (initres == NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            statres = dd_getservicestatus_1( &statargs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sleep(1);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          return EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     "edmdispd failure while starting restore engine" );
xdr_free( xdr_DD_getservicestatus_result, (char *)statres );
                                                                                                                          RE_CLIENT_IFSPEC(re_if_spec);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  return EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (now >= end_time)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  time ( know );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       xdr_free( xdr_DD_getservicestatus_result, (char *)statres
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       time_t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (statres == NULL)
                                                                                                                                                                                                                       sizeof(handlePtr -> opaque128) );
                                                                                                                                                                                                                                                                                                                                          statres -> handle.handle_val,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dd_getservicestatus_1( &statargs, handlePtr->dd_binding_handle );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -> status != DD_SERVICE_RUNNING)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              return EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "timeout waiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11
11
                                (unsigned char *) handlePtr ->
RE_PROGNUM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DD_SERVICE_STARTING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRST_Initialize
        RSTinitfin.c 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for edmdispd to start restore engine"
);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             service_handle,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       handlePtr -> dd_binding_handle );
                                                    opaque128,
Page 77 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 77 of 172
    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #ifdef DEBUG
/* inco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #endif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fri Jan 04 14:40:00 2008
                                                         ìf (
                                                                                                                                                  else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     if (retval
{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              } while (api_status != E_SUCCESS);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   increase rpc timeout during debugging */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      api_status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (api_status == E_SUCCESS)
                                                                                                                        rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       return EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    status
                                                                                                                                                                                                                                                                                                                                                                                                                                                 set_rpc_obj( re_initialize, &re_init_args.RPCobjID );
re_init_result = re_initialize_1( &re_init_args, re_handle );
if (!re_init_result) {
                                                                                                                                                                                                                                                                                                                                       else (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       re_init_args.username = human_uidname;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clnt_control( re_handle, CLSET_TIMEOUT, (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if ((status == error_status_ok) &&
    api_status = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sleep( 1 );
retval = cs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpc_timeout.tv_usec = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpc_timeout.tv_sec = RPC_TIMEOUT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    re_handle = handlePtr -> re_binding_handle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               time ( &now );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if (now >= end_time)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         time_t now;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 return EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                              E_SUCCESS)
                                                                                                                                                                                                                                                                                                               api_status = re_init_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                 api_status = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                  xdr_free( xdr_RE_status_result,
                                                                                                                                                                                                                                                                                                                                                                                                       rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                           /* release RPC result struct:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     csc_connect_to_rpc_service(
                                                                                                   "failure connecting to restore engine"
                                                                                                                                                                                                                                                                                                                                                                                    "failure communicating with restore engine"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_VERSNUM, &re_if_spec,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* give restore engine time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        &status);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EDMRST_Initialize
      RSTinitfin.c 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "timeout connecting to restore engine" );
                                /* return
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_CLIENT_GROUP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        re_if_spec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             &handlePtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (unsigned char *)hostname
                                rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (retval != 0))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -> re_binding_handle,
                              eng
                                                                                                                                                                                                                                                char *)re_init_result);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              char *)&rpc_timeout );
                                  handle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            to get going */
                                  on success */
        Page 78 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 78 of 172
                                                                                                                                                                                                                                                                                                                                                                                      <u>`</u>
```

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 79 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* End of EDMRST_Initialize() */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          return( api_status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *svrHdl =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (serverHandle)re_handle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>`</u>;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_Initialize
    RSTinitfin.c 7
  Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fri Jan 04 14:40:00 2008
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 eerrno_ty EDMRST_Ping( serverHandle svrHdl )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 80 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       else {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         set_rpc_obj( re_ping, &re_ping_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             if (NULL == re_ping_result) {
   api_status = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               re_ping_result = re_ping_1( &re_ping_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_null_args reRE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if ( NULL == svrHdl || NULL == handlePtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDMRST_Finish
                                                                                                                                                                                                                                                                                                           Parameters:
                                                                                                                                                                                                                                                                                                                                                                  API.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ping:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       api_status = re_ping_result->status;
/* release RPC result struct: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                           disconnect from the Restore Engine. After calling this function,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This routine will clean up any local memory used in the session and will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mark phase. It will be rejected if a restore is currently being executed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             xdr_free( xdr_RE_status_result, (char *)re_ping_result);
                                                                                                                                                                                                                                                     svrHdl (I) - A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_Initialize MUST be called before calling any other functions in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This function terminates a restoral session,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                syrHdl (I) - A pointer to this user's client handle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This function allows a ping to be issued in order to keep the engine alive and running so that the engine will not time out.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Function Description:
                                                                                                                                                                         Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               || svrHdl != handlePtr->re_binding_handle )
                                                                                            EP_RB_RECOVER_INVALOP
                                                                                                                 EP_RB_RECOVER_RPC_FAIL
                                                                                                                                             EP_RB_RECOVER_BAD_ARGS
                                                                  EP_RB_RECOVER_SERVERFAIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             api_status = E_SUCCESS;
                                                                                                                                                                                                                           Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   re_ping_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *re_ping_result = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_Ping
       RSTinitfin.c8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                but only during the browse and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for the
         Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                this
```

```
eerrno_ty

EDMRST_Finish( serverHandle svrHdl )
                                                                                                                                                                                                                                                                                                     else (
                                                                                                                                                                                                                                                                                                                                                                                                               set_rpc_obj( re_finish, &re_finish_args.RPCobjID );
re_finish_result = re_finish_1( &re_finish_args, svrHdl );
if (!re_finish_result) {
                                                    return( api_status );
                                                                                                                               rec_api_log_end();
/* EDMRST_Finish */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         eerrno_ty a
RE_null_args r
RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             if ( NULL == svrHd1 || NULL == handlePtr
|| svrHd1 != handlePtr->re_binding_handle )
                                                                                                                                                                                                                 api_status = re_finish_result->status;
/* release RPC result struct: */
xdr_free( xdr_RE_status_result, (char *)re_finish_result);
                                                                                                                                                                                                                                                                                                                                                       api_status = EP_RB_RECOVER_RPC_FAIL;
rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               re_finish_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   csc_status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              api_status = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *re_finish_result = NULL;
                                                                                                                                    /* write last log and close the log file. */
```

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RSTinitfin.c 10

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Page 83 of 172 Page 83 of 172 RSTinitfin.c 11 Fri Jan 04 14:40:00 2008 Page 84 of 172 Fri Jan 04 14:40:00 2008 Page 84 of 172 RSTinitfin.c 12 Fri Jan 04 14:40:00 2008 Fri Jan 04 14:40:00 2008

```
/*
* External declarations
                                                                                                                                              /*
* Local headers
                                                                                                                                                                                                                                                                    /*
* Epoch headers.
                                                                                      #include <RSTsup_rpc.h>
#include <RSTsup_csm.h>
                                                                                                                                                                                                                                 #include <eb/eb_port.h>
#include <eb/rb_log.h>
                                                                                                                           #include <RSTinterns.h>
                                                                                                                                                                                                                                                                                                                                                              /*
* System headers.
*/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* The following provides an RCS id in the binary that can be located ** with the what(1) utility. The intent is to keep this short. \star/
                                                                                                                                                                                                                                                                                                                                                                                                                                                    #define __POSIX_SOURCE 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #endif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * * * * * * * * * * *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #ifndef lint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        * The following is required for code that uses POSIX API's.
* Remove for non-POSIX, non-portable code.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ** Copyright (c) 1998,1999 by EMC Corporation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ** File Name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Standard defines required to turn on OS features go here.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Feature test switches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Compile-Time Options:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This function is provided to allow retrieval of the top level objects which are restorable for the given client.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This module contains the {\it EDMRST\_GetTopLevelObjects} Restore API function.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This section must list any compile time definitions which will affect this header.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RSTgettlob.c
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EDMRST_GetTopLevelObjects ( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 87 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    * EDMRST_GetTopLevelObjects:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        objects if there are more than "maxEntries". The cookie will be returned as {\tt DONE\_COOKIE} when there are no more to retrieve.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             routine. This routine will update the cookie to allow retrieval of more
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The cookie must be initialized to INIT_COOKIE on the first call to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              up successfully.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  It is a GOAL of this routine to return all work-items ever backed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                work items which are restorable for the given client.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This function is provided to allow retrieval of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      file for work-items of the given client.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cookie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            numberEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              topLev0bjs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              maxEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sourceHost
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                svrHdl
                     rpc_args.maxEntries = maxEntries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rbe_log_debug_sub( 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_get_top_level_objects_args RSTRPC_tlo_list
                                                     rpc_args.sourceHost = (char *)sourceHost;
                                                                                  /* Prepare input argument structure for RPC:
                                                                                                                                                                                                                                                   for ( index=0; index<maxEntries; index++ )</pre>
                                                                                                                                                                                                                                                                           /* validate target restorableObjects: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               restorableObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_get_top_level_objects_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (sourceHost == NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     numberEntries==NULL
                                                                                                                                                                                                                                                                                                                                                             svrHdl ==NULL
                                                                                                                                                                                                                                                                                                                                                                                        topLevObjs== NULL
                                                                                                                                                                                                                                                                                                                                                                                                                maxEntries <= 0
                                                                                                                                                                                                                                                                                                                                                                                                                                             cookie==NULL
                                                                                                                                                                                                                                                                                                                                return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                            if (RESTORABLE_OBJECT != objPtrArray[index]->restoreObjType
                                                                                                                                       return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (OI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (I)
                                                                                                                                                                 NULL != objPtrArray[index]->rpcObjPtr )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Currently, though, it only looks in the config
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_GetTopLevelObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ptr to pre-allocated array of restorableObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   a place holder for the list position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the real number of objects returned in the array
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the maximum number of objects to return
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the name of the source host being restored
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A pointer to this user's client handle for the
*cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       const char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  meaningful to only the internals of the API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        butter ptrs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                restorableObjectPtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             const short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "EDMRST_GetTopLevelObjects called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   **objPtrArray =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            index;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      result = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         restorableObject **)topLevObjs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *topLevObjs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               maxEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *cookie )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *numberEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *sourceHost
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *temp_list;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 88 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_GetAllTopLevelObjects:
                                                                                                                                                                                                                                                                                returned as DONE_COOKIE when there are no more to retrieve
                                                                                                                                                                                                                                                                                                 routine. This routine will update the cookie to allow retrieval of more objects if there are more than "maxEntries". The cookie will be
                                                                                                                                                                                                                                                                                                                                                        The cookie must be initialized to INIT_COOKIE on the first call to this
                                                                                                                                                                                                                                                                                                                                                                                                                  file for work-items of the given client.
                                                                                                                                                                                                                                                                                                                                                                                                                                             It is a GOAL of this routine to return all work-items ever backed up successfully. Currently, though, it only looks in the config
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    work items which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This function is provided to allow retrieval of the
                                                                                                                 maxEntries
                                                                                                                                         sourceHost
                                                                                                                                                                                              svrHdl
                               numberEntries
                                                                                    topLevObjs
       cookie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   xdr_free( xdr_RE_get_top_level_objects_result, (char *)rpc_result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     result = rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* release RPC result struct: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpc_result = re_get_top_level_objects_1( &rpc_args,
if (!rpc_result) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  set_rpc_obj( re_get_top_level_objects, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        end of EDMRST_GetTopLevelObjects() */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                move results to caller's area, if successful: */
(rpc_result->status == E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ΞÉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  * *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         while ( rpc_result->numEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         index = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           return( EP_RB_RECOVER_RPC_FAIL );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *numberEntries = rpc_result->numEntries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *cookie = rpc_result->cookie;
                            0
                                                                                  (E)
(E)
                                                                                                                                                                                              (I)
       (OI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           because returned top level objects can't be freed yet */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   need this to end with NULL in rpc_result->topLevelObjs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (rpc_result->numEntries)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    are restorable for the given client.
                            - the real number of objects returned in the array
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc_result->status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDMRST_GetTopLevelObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpc_result->numEntries--;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             objPtrArray[index++]->rpcObjPtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if ( !temp_list || !rpc_args.maxEntries--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         temp_list = rpc_result->topLevelObjs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      free( temp_list );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpc_result->topLevelObjs = temp_list->next;
                                                                                                                                           the name of the source host being restored
                                                                                    ptr to pre-allocated array of restorableObject
                                                                                                                 the maximum number of objects to return
                                                                                                                                                                                              A pointer to this user's client handle for the
       a place holder for the list position
                                                                                                                                                                      Restore Engine (server) connection.
                                                            buffer ptrs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                = (RSTRPC_restorable_obj_root *)temp_list->tlo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          break;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* some null pointer or too many returned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fri Jan 04 14:40:00 2008
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RSTgettlob.c3

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RSTgettlob.c 4

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EDMRST_GetAllTopLevelObjects ( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpc_result = re_get_all_top_level_objects_1( &rpc_args, svrHdl );
if (!rpc_result) (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       set_rpc_obj( re_get_all_top_level_objects, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rpc_args.cookie = *cookie;
                                                                                                                                                                                                                                                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rpc_args.maxEntries = maxEntries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpc_args.sourceHost = (char *)sourceHost;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for ( index=0; index<maxEntries; index++ )</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rbe_log_debug_sub( 0, "EDMRST_GetAllTopLevelObjects called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        restorableObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_get_top_level_objects_args
RSTRPC_tlo_list
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* Prepare input argument structure for RPC: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* validate target restorableObjects: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_get_top_level_objects_result
                                                                                                                                                                                                                                                                                                                                                                            move results to caller's area, if successful: */
  (rpc_result->status == E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (sourceHost==NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  svrHdl==NULL )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 maxEntries <= 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cookie==NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           numberEntries==NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            topLevObjs== NULL
while ( rpc_result->numEntries )
                                                                                                                                                                                                                                                                                             *numberEntries = rpc_result->numEntries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        return( EP_RB_RECOVER_RPC_FAIL );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if (RESTORABLE_OBJECT != objPtrArray[index]->restoreObjType
                                                                                                                                                                                                                                                                                                                          *cookie = rpc_result->cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         || NULL != objPtrArray[index]->rpcObjPtr )
                                                                       objPtrArray[index++]->rpc0bjPtr
                                                                                                                                                       if ( !temp_list || !rpc_args.maxEntries-- )
                                                                                                                                                                                      temp_list = rpc_result->topLevelObjs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             const char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  meaningful to only the internals of the API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  const short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          restorableObjectPtr
                                             (RSTRPC_restorable_obj_root *)temp_list->tlo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRST_GetAllTopLevelObjects
                                                                                                                            /* some null pointer or too many returned */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           **objPtrArray = (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             result = E_SUCCESS ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              restorableObject **)topLevObjs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *topLevObjs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     maxEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *numberEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *cookie )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *sourceHost,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *temp_list;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 89 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     return( result );
/* end of EDMRST_GetNetworkTopLevelObjects() */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           xdr_free( xdr_RE_get_top_level_objects_result, (char *)rpc_result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             result =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* release RPC result struct:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (rpc_result->numEntries)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpc_result->topLevelObjs = temp_list->next;
free( temp_list );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpc_result->status = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc_result->numEntries--;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_GetAllTopLevelObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 90 of 172
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Page 91 of 172 Page 91 of 172 RSTgettlob.c 7 Fri Jan 04 14:40:00 2008 Page 92 of 172 Fri Jan 04 14:40:00 2008 Page 92 of 172 RSTgettlob.c 8 Fri Jan 04 14:40:00 2008 Fri Jan 04 14:40:00 2008

#include <RSTinterns.h>
#include <RSTsup_csm.h>

```
eerrno_ty
EDMRST_GetRestorableObjects( serverHandle
Page 95 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 95 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDMRST_GetRestorableObjects API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           routine. This routine will update the cookie to allow retrieval of more objects if there is more than "maxEntries". The cookie will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The cookie must be initialize to INIT_COOKIE on the first call to this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     restorable objects it contains.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Given a parent (i.e.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      returned as DONE_COOKIE when there are no more to retrieve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Function Description.
                                                                                                                                                                                            RE_get_restorable_objects_start_args
                                                             struct RSTRPC_restorable_obj_root
                                                                                         RSTRPC_uro_list
                                                                                                                                                                      RE_get_restorable_objects_output_result
                                                                                                                                                                                                                          RE_get_restorable_objects_start_result
                                                                                                                   RE_get_restorable_objects_output_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GetDirContents().
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             return codes from GetWorkItemContents() and from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EP_RB_RECOVER_INVALOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EP_RB_RECOVER_BAD_COOKIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EP_RB_RECOVER_BAD_ARGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EP_RB_RECOVER_INVAL_OBJNAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cookie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              numEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  objBufPtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    maxEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             allowBF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    parentPtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDMRST_GetRestorableObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               container) restorable object, return the children
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I/0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            operation completed successfully
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (I) A pointer to this user's client handle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (I) ptr to parent restorableObject
                                                                                                                                                                                                                                                                                                                                                                                                               const restorableObjectPtr parentPtr,
                                                                                                                                                                                                                                                                                                          long
RSTgetrobs.c3
                                                                                                                                                                                                                                                                                                                                                                const long
                                                                                                                                                                                                                                                                                                                                                                                        const boolean_ty
                                                                                                                                                                                                                                                                                                                                         restorableObjectPtr *objBufPtr,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      max. # of entries that the preallocated buffer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ptr to a long integer whose value is meaningful to only the internals of the API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ptr to preallocated array of restorableObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I) flag indicating whether or not to include bad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ptr to buffer to receive number of entries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        buffer ptrs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     returned in objBufArray
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         files
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hold
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DONE_COOKIE: end of query output
                                     result = E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the call is issued without
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the cookie is DONE_COOKIE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              input cookie ptr is NULL or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             or objBufPtr is NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       input restorableObject ptr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              not have a valid name;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          input restorableObject does
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the correct context setup;
                                                                                                                     output_rpc_args;
                                                                                                                                                                                                   start_rpc_args;
                                                                                                                                                                                                                             *start_rpc_result =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      initial query input
                                                                 *temp_rob];
                                                                                           *temp_list;
                                                                                                                                                                                                                                                                                                                                                                                          allowBF,
                                                                                                                                                                                                                                                                                                             *numEntries,
                                                                                                                                                                         *output_rpc_result
                                                                                                                                                                                                                                                                                                                                                                   maxEntries
  Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                               NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  for the
                                                                                                                                                 NULL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page 96 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     start_rpc_args.parentObj = malloc( sizeof(struct RE_restorable_obj) );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     if (
                                                                                                                                                                                                                                                                                                                                                                start_rpc_args.allowBadFiles = allowBF;
                                                                                                                                                                                                                                                                                                                                                                                                                    start_rpc_args.parentObj->RE_restorable_obj_u.uroInfo
                                                                                                                                                                                                                                                                                                                                                                                                                                              start_rpc_args.parentObj->objLevel = temp_robj->objLevel;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ΉÉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             if
×
                                                                                                                   if (!start_rpc_result) {
                                                                                                                                                                                                   start_rpc_result = re_get_restorable_objects_start_1(
                                                                                                                                                                                                                                                                                set_rpc_obj( re_get_restorable_objects_start
                                                                                                                                                                                                                                                                                                             start_rpc_args.maxEntries = maxEntries;
                                                                                                                                                                                                                                                                                                                                  start_rpc_args.cookie = *cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (*cookie == DONE_COOKIE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* request the restorable objects with one RPC */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* Prepare input argument structure for RPC: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* validate target restorableObjects: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rbe_log_debug_sub( 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  restorableObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (RESTORABLE_OBJECT !=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (NULL == (temp_robj = ((restorableObject *)parentPtr)->rpcObjPtr))
return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    validate parent object type as top level
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (parentPtr==NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ( index=0; index<maxEntries; index++</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             numEntries==NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ((restorableObject *)parentPtr)->restoreObjType )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   svrHdl == NULL )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       maxEntries <= 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cookie==NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               objBufPtr== NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (temp_robj->objLevel != RSTRPC_container_type) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (temp_robj->objLevel != RSTRPC_tlo_type)
                                                                                         result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if (temp_robj->objLevel != RSTRPC_leaf_type)
                                                               rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           return EP_RB_RECOVER_INVAL_OBJTYPE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        return(EP_RB_RECOVER_BAD_COOKIE);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if ( (NULL == objPtrArray[index])
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                          (struct RSTRPC_user_restorable_object *)temp_robj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   || (NULL != objPtrArray[index]->rpcObjPtr
                                                                                                                                                                                                                                                      &start_rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESTORABLE_OBJECT != objPtrArray[index]->restoreObjType)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRST_GetRestorableObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        return( EP_RB_RECOVER_INVALOP );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                return( EP_RB_RECOVER_INVAL_OBJTYPE
    RSTgetrobs.c 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "EDMRST_GetRestorableObjects called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  **objPtrArray = (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        restorableObject **)objBufPtr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         or container
         Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fri Jan 04 14:40:00 2008
                                                                                                                                                                              &start_rpc_args,
```

```
Fri Jan 04 14:40:00 2008
                                                                                                                                           else
/* release RPC result struct: contents and struct */
                                                                    result = start_rpc_result->status;
                                                                                                                                                                          EDMRST_GetRestorableObjects
                                                                                                                                                                          Page 97 of 172
                                                                                                                                                                       Fri Jan 04 14:40:00 2008
                                                                                                                       /* needed to end with NULL in output_rpc_result->childrenObjs,
                                                           because returned user rest. objects can't be freed yet */
output_rpc_result->childrenObjs = temp_list->next;
output_rpc_result->numEntries--;
                               free ( temp_list );
                                                                                                                                                                          EDMRST_GetRestorableObjects
                                                                                                                                                                          Page 98 of 172
```

result = EP_RB_RECOVER_SERVERFAIL;

*

(char *)output_rpc_result);

index++;

```
řf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            while (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                output_rpc_args.maxEntries = maxEntries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* poll for completion or error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (result != E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       free( start_rpc_args.parentObj
                                                                                                                                                                                                                                                                                                                                                           move results to caller's area, if successful: */
(result == E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             prepare to call another RPC for results, if successful: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else
                                                                                                                                                                                                             while ( output_rpc_result->numEntries )
                                                                                                                                                                                                                                              index = 0;
                                                                                                                                                                                                                                                                  *numEntries = output_rpc_result->numEntries;
                                                                                                                                                                                                                                                                                                   *cookie = output_rpc_result->cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ΞÉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       output_rpc_result = re_get_restorable_objects_output_1(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      set_rpc_obj( re_get_restorable_objects_output,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unsigned int poll_delay = 100000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     return( result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  xdr_free( xdr_RE_get_restorable_objects_start_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (!output_rpc_result) {
    result = EP_RB_RE(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                             if ( !temp_list || !output_rpc_args.maxEntries--
                                 objPtrArray[index]->rpcObjPtr =
                                                                                                                                                     temp_list = output_rpc_result->childrenObjs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       usleep( poll_delay );
if (poll_delay < RST_N</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* wait till next poll */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        output_rpc_result = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              xdr_free(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            result = output_rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (poll_delay < RST_MAX_GET_ROBJS_DELAY) {
  poll_delay *= 2;
  if (poll_delay *- 2;</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (char *)start_rpc_result );
(RSTRPC_restorable_obj_root *)temp_list->uro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     &output_rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (poll_delay > RST_MAX_GET_ROBJS_DELAY)
poll_delay = RST_MAX_GET_ROBJS_DELAY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                xdr_RE_get_restorable_objects_output_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (char *)output_rpc_result );
                                                            /* null pointer or too many returned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>`</u>;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  &output_rpc_args,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* .1 second */
                                                                                                                         _
                                                                  *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    return( result );
/* EDMRST_GetRestorableObjects */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ĺξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (output_rpc_result)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             release RPC result struct's contents and itself:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  xdr_free( xdr_RE_get_restorable_objects_output_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (output_rpc_result->numEntries)
```

Page 99 of 172 Page 99 of 172 RSTgetrobs.c7 Fri Jan 04 14:40:00 2008 Page 100 of 172 Fri Jan 04 14:40:00 2008 Page 100 of 172 RSTgetrobs.c8 Fri Jan 04 14:40:00 2008 Fri Jan 04 14:40:00 2008

```
** EDMRST_SetPrevBac

** EDMRST_SetNextBac

** EDMRST_SetFirstea

** EDMRST_SetBackupF

EDMRST_GetCurrent

** EDMRST_GetCurrent

** EDMRST_GetCurrent

** EDMRST_GetAllBack

** EDMRST_GetAllBack

** FOMPLIE-Time Options:

** Which will
#include <eb/eb_port.h>
#include <ebutil/ebutil.h>
#include <eb/rb_log.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #endif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #define
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               static char RCS_id [] = "$RCSfile$ "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #ifndef lint
                                                                                                 * Epoch headers.
                                                                                                                                                                                                                    * System headers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* The following provides an RCS id in the binary that can be located ** with the what(1) utility. The intent is to keep this short.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ***********************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ** of query functions against the currently setup backup.
                                                                                                                                                                                                                                                                                                                                                                                                               * Standard defines required to turn on OS features go here.
                                                                                                                                                                                                                                                                                                                                                                                                                                        * Feature test switches.
                                                                                                                                                                                                                                                                                                                                           * Remove for non-POSIX, non-portable code.
                                                                                                                                                                                                                                                                                                                                                                  * The following is required for code that uses POSIX API's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** This module contains the Restore API functions that set the
** recover_context to a specific time of the backup and a number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ** Copyright (c) 1998, 1999 by EMC Corporation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ** File Name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Table of Contents:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _POSIX_SOURCE 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRST_SetBackupForTime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRST_GetCurrentBackupTime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               {\tt EDMRST\_GetAllBackupTimes}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDMRST_GetCurrentTemplate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRST_SetMostRecentBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDMRST_SetFirstBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_SetNextBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRST_SetPrevBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This section must list any compile time definitions which will affect this header.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RSTgtbkups.c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "$Revision$ "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  '$Date$" ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 101 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NEW_SRC_FILE();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*
 * Local function prototypes
 */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #include <RSTinterns.h>
#include <RSTsup_csm.h>
#define RST_MAX_GET_ROBJS_DELAY 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*
* Local headers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       * #defines, structures, typedefs local to this source file
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* max seconds between polls */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 102 of 172
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EDMRST_SetPrevBackup( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           eerrno_ty
Page 103 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 103 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Function Description:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRST_SetPrevBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           svrHdl (I) - A pointer to this user's client handle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      flags (I) - Selection Flags: e.g., Complete backups only/partial ok
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if (NULL ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rbe_log_debug_sub( 0, "EDMRST_SetPrevBackup called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E_SUCCESS - operation completed successfully EP_RB_RECOVER_RPC_FAIL - if comms with restore engine fail EP_RB_NO_PREV_CATALOG - when at the first catalog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpc_result = re_set_prev_backup_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        set_rpc_obj( re_set_prev_backup, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpc_args.flags = flags;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ΞÉ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP_RB_RECOVER_PERMISSION_DENIED - when user cannot access the file
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Set the restore_context to that of the previous backup with respect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             to the current one.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (svrHdl==NULL)
                                                                                                                                                                                                                                                                                                                                               else
                                                                                                                                                                                                                                                                                                                                                                                        if (E_SUCCESS != rpc_result->status) {
   result = EP_RB_RECOVER_RPC_FAIL;
   rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                while (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                          result =
                                                                                                                                                                           /* poll
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       return ( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpc_result)
                                                                 set_rpc_obj (
                                                                                      unsigned int poll_delay = 100000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        n_rong
                                                                                                                                                                           for completion or error */
                                 re_set_previous_backup_result,
                                                                                                                                                                                                                                                                                     EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                             rpc_args_.maxEntries = maxEntries; */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRST_SetPrevBackup
  RSTgtbkups.c3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         null_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *rpc_result_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        svrHdl,
flags )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of the new catalog
                                    &null_args.RPCobjID );
                                                                                           /* .1 second */
Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fri Jan 04 14:40:00 2008
Page 104 of 172
                                                            EDMRST_SetNextBackup( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* EDMRST_SetPrevBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 104 of 172
                                                                                                                                                       Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Function Description:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EDMRST_SetNextBackup API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of the specified work item.
                                                                                                                                                                                                                                                                                                                                                                                                                       flags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 svrHdl (I) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This routine sets the recover environment to the the next backup
                                                                                                                                                                                                                                                     E_SUCCESS - operation completed successfully
EP_RB_RECOVER_RPC_FAIL - if comms with restore engine fail
EP_RB_NO_NEXT_CATALOG - when at the most recent catalog
EP_RB_RECOVER_PERMISSION_DENIED - when user cannot access the file
                                                                                                                                                                                                   EP_RB_RECOVER_NO_CATALOG - when mcat_set_mcplane failed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               return result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if (rpc_result_1 != NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                         (I) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            xdr_free (xdr_RE_status_result, (char *)rpc_result_1);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                                                                                                                                                                                                                       Selection Flags: e.g., Complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A pointer to this user's client handle for
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if (result ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 else
                                    u_long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 if (!rpc_result_1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpc_result_1 = re_set_previous_backup_result_1(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if (poll_delay < RST_MAX_GET_ROBJS_DELAY) (</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              usleep( poll_delay );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rpc\_result\_1 = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      xdr_free( xdr_RE_status_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            result =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    result = EP_RB_RECOVER_RPC_FAIL;
rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* wait till next poll */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* release RPC result struct: contents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  poll_delay *= 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (poll_delay > RST_MAX_GET_ROBJS_DELAY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDMRST_SetPrevBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               poll_delay = RST_MAX_GET_ROBJS_DELAY;
  RSTgtbkups.c 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpc_result_1->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (char *)rpc_result_1 );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EP_RB_RECOVER_RPC_INCOMPLETE)
                                    flags
                                                                 svrHd1,
                                                                                                                                                                                                                                of the new catalog
                                                                                                                                                                                                                                                                                                                                                                                                                            backups only/partial ok
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         &null_args, svrHdl);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the
       Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fri Jan 04 14:40:00 2008
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Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       if (NULL == rpc_result)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rpc_result = re_set_next_backup_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             set_rpc_obj( re_set_next_backup, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpc_args.flags = flags;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rbe_log_debug_sub( 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    validate args first:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (svrHdl ==NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             if (E_SUCCESS != rpc_result->status) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                while (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      \
*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* poll for completion or error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       result = EP_RB_RECOVER_RPC_INCOMPLETE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                  if (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      set_rpc_obj(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        if (!rpc_result_1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpc_result_1 = re_set_next_backup_result_1(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  unsigned int poll_delay = 100000;
                                                                                               if (poll_delay < RST_MAX_GET_ROBJS_DELAY) (
   poll_delay *= 2;</pre>
                                                                                                                                                  usleep( poll_delay );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       result = EP_RB_RECOVER_RPC_FAIL;
rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                         /* wait till next poll */
                                                                                                                                                                                                       rpc_result_1 = NULL;
                                                                                                                                                                                                                                                          xdr_tree( xdr_RE_status_result,
                                                                                                                                                                                                                                                                                                                                                                                                                 result = rpc_result_1->status;
                                                                                                                                                                                                                                                                                 /* release RPC result struct: contents and struct */
                                     if (poll_delay > RST_MAX_GET_ROBJS_DELAY)
poll_delay = RST_MAX_GET_ROBJS_DELAY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rpc_args_.maxEntries = maxEntries; */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              re_set_next_backup_result, &null_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "EDMRST_SetNextBackup called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     null_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRST_SetNextBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *rpc_result_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *rpc_result;
                                                                                                                                                                                                                            (char *)rpc_result_1 );
         RSTgtbkups.c5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* .1 second */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         &null_args, svrHdl);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NULL);
      Page 105 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 105 of 172
      Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDMRST_SetFirstBackup( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* EDMRST_SetNextBackup */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Function Description:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDMRST_SetFirstBackup API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                svrHdl (I) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          flags (I) - Selection Flags: e.g., Complete backups only/partial ok
                                                                else
                                                                                                                                                                                                if (NULL == rpc_result)
                                                                                                                                                                                                                                                   rpc_result = re_set_first_backup_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                      set_rpc_obj( re_set_first_backup, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                  rpc_args.flags = flags;
                                                                                                                                                                                                                                                                                                                                                                                                                 if (svrHdl ==NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rbe_log_debug_sub( 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_set_backup_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 \it EP\_RB\_RECOVER\_RPC\_FAIL - if comms with restore engine fail \it EP\_RB\_RECOVER\_PERMISSION\_DENIED - when user cannot access the file of
                                                                                                                                                                                                                                                                                                                                                                                                                                           /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Set the recover_context to that of the first backup catalog plane.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              return result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if (rpc_result_1 != NULL)
                                                                                                               rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                           result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           xdr_free (xdr_RE_status_result, (char *)rpc_result_1);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                                                                                                                                                                                     return( EP_RB_RECOVER_BAD_ARGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              u_long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              operation completed successfully
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "EDMRST_SetFirstBackup called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   null_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *rpc_result_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRST_SetNextBackup
  RSTgtbkups.c6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            svrHdl,
flags )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the new catalog
Page 106 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 106 of 172
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}
/* EDMRST_SetFirstBackup */
  Page 107 of 172
                                                                                                                   * Function Description:
                                                                                                                                                                           * EDMRST_SetBackupForTime API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 107 of 172
                                                              specified time
                                                                                      Set the recover_context to that of the backup catalog plane of the
                                                                                                                                                                                                                                                                                                                                                                                             return result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  if (rpc_result_1 != NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                  xdr_free (xdr_RE_status_result, (char *)rpc_result_1);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if (E_SUCCESS != rpc_result->status) {
   result = EP_RB_RECOVER_RPC_FAIL;
   rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        while (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          result = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* poll for completion or error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (!rpc_result_1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        set_rpc_obj(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unsigned int poll_delay = 100000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpc_result_1 = re_set_first_backup_result_1(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          result = EP_RB_RECOVER_RPC_FAIL;
rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                result = rpc_result_1->status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      usleep( poll_delay );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (poll_delay < RST_MAX_GET_ROBUS_DELAY) {</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpc_result_1 = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   xdr_free( xdr_RE_status_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* wait till next poll */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* release RPC result struct: contents and struct ^{*}/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      poll_delay *= 2;
if (poll_delay > RST_MAX_GET_ROBJS_DELAY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDMRST_SetFirstBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_set_first_backup_result, &null_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpc_args_.maxEntries = maxEntries; */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            poll_delay = RST_MAX_GET_ROBJS_DELAY;
RSTgtbkups.c7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (char *)rpc_result_1 );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* .1 second */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           &null_args, svrHdl);
  Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 108 of 172
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDMRST_SetBackupForTime ( serverHandle svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       flags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for Time (I) - The time for which the backup is requested flags (I) - Selection Flags: e.g., Complete backups only / partial ok
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* validate args first: */
if (svrHdl==NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E_SUCCESS - operation completed successfully EP_RB_RECOVER_RPC_FAIL - if comms with restore engine fail EP_RB_RECOVER_NO_CATALOG - catalog cannot be found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if (NULL == rpc_result)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpc_result = re_set_backup_for_time_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   set_rpc_obj( re_set_backup_for_time, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rbe_log_debug_sub( 0, "EDMRST_SetBackupForTime called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpc_args.flags = flags;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpc_args.time = forTime;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RE_backup_for_time_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (I) - A pointer to this user's client handle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if (E_SUCCESS != rpc_result->status) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                        /* poll for completion or error */
while (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                               *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               result = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                   unsigned int poll_delay = 100000;
                                                                                                                                                                                                      rpc_result_1 = re_set_backup_for_time_result_1(
                                                                                                                                                                                                                                                        set_rpc_obj(
                                                                                                                   if (!rpc_result_1)
                                                                                                                                                                                                                              re_set_backup_for_time_result, &null_args.RPCobjID );
                                 rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                              result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          u_long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       const time_t forTime,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRST_SetBackupForTime
                                                                                                                                                                                                                                                                                                                                                                                                                     rpc_args_.maxEntries = maxEntries; */
  RSTgtbkups.c8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *rpc_result_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           null_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             flags )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpc_args;
                                                                                                                                                                                                                                                                                        /* .1 second */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                             &null_args, svrHdl);
                                         NULL);
    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
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EDMRST_GetCurrentBackupTime( serverHandle svrHdl,
                                                                                                                                                                                                                                                                                                                           eerrno_ty
       Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Function Description:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDMRST_GetCurrentBackupTime
                                                                                                                                                RE_get_current_backup_time_result *rpc_result;
                                                                                                                                                                                RE_null_args
                                                                                          rbe_log_debug_sub( 0, "EDMRST_GetCurrentBackupTime called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                       EP_RB_RECOVER_NO_CURR_BACKUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                             EP_RB_RECOVER_BAD_ARGS - invalid input argument
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EP_RB_RECOVER_INVALOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EP_RB_RECOVER_RPC_FAIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bkupTime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       svrHdl -
                                  /* validate args first:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E\_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      is set to and return it in the preallocated buffer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Retrieve the time of the backup that the current recover_context
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (rpc_result_1 != NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRST_SetBackupForTime */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* release RPC result struct: contents and struct */
xdr_free (xdr_RE_status_result, (char *)rpc_result_1);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (I) A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Restore Engine (server) connection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the time of the backup
                                                                                                                                                                             rpc_args;
                                                                                                                                                                                                             result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 if (poll_delay < RST_MAX_GET_ROBJS_DELAY) {</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            usleep( poll_delay );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc\_result\_1 = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 xdr_free( xdr_RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* wait till next poll */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                result = rpc_result_1->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              operation completed successfully
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* release RPC result struct: contents and struct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      poll_delay *= 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           if (poll_delay > RST_MAX_GET_ROBJS_DELAY)
                                                                                                                                                                                                                                                                      time_t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              poll_delay = RST_MAX_GET_ROBJS_DELAY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRST_SetBackupForTime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           - call issued out of sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if comms with restore engine fail
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (char *)rpc_result_1 );
RSTgtbkups.c9
                                                                                                                                                                                                                                                                                                                                                                                                                                  no valid backup currently
                                                                                                                                                                                                                                                              *bkupTime )
Page 109 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 109 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *
  Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               eerrno_ty
EDMRST_SetMostRecentBackup( serverHandle svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ******************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Function Description:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRST_SetMostRecentBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       svrHdl (I) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 flags (I) - Selection Flags: e.g., Complete backups only/partial ok
                                       if (NULL ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_set_backup_time_args
                                                                                     rpc_result = re_set_most_recent_backup_1( &rpc_args, svrHdl );
                                                                                                                                              set_rpc_obj( re_set_most_recent_backup, &rpc_args.RPCobjID );
                                                                                                                                                                        rpc_args.flags = flags;
                                                                                                                                                                                                                                                            if (svrHdl ==NULL)
                                                                                                                                                                                                                                                                                                                                             rbe_log_debug_sub( 0,
                                                                                                                                                                                                                                                                                                                                                                                                     RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                           RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Set the recover_context to that of the most recent backup catalog plane. The recover_context will be set accordingly.
                                                                                                                                                                                                                                                                                         /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EP_RB_RECOVER_PERMISSION_DENIED - when user cannot access the file of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E\_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        return result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               else {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpc_result = re_get_current_backup_time_1( &rpc_args, svrHdl );
if (!rpc_result) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    set_rpc_obj( re_get_current_backup_time, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (svrHdl==NULL | | bkupTime==NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDMRST_GetCurrentBackupTime */
                                                                                                                                                                                                                                 return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Restore Engine (server) connection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   xdr_free( xdr_RE_get_current_backup_time_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    result = rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *bkupTime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                result = EP_RB_RECOVER_RPC_FAIL;
                               rpc_result)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              operation completed successfully
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       = rpc_result->backupTime;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (char *)rpc_result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         u_long
                                                                                                                                                                                                                                                                                                                                               "EDMRST_SetMostRecentBackup called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_GetCurrentBackupTime
                                                                                                                                                                                                                                                                                                                                                                                                                             null_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                     *rpc_result_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 result;
RSTgtbkups.c 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       flags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the new catalog.
  Page 110 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 110 of 172
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}
/* EDMRST_SetMostRecentBackup */
                                                                Page 111 of 172
                                                                                                                                                                                                                                   return result;
                                                                                                                                                                                                                                                                                                                                                                       if (rpc_result_1 != NULL)
                                                                                                                                                                                                                                                                                       xdr_free (xdr_RE_status_result, (char *)rpc_result_1);
                                                                                                                                                                                                                                                                                                                /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (E_SUCCESS != rpc_result->status) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       while (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result = EP_RB_RECOVER_RPC_INCOMPLETE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /* poll for completion or error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              set_rpc_obj(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unsigned int poll_delay = 100000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (!rpc_result_1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpc_result_1 = re_set_most_recent_backup_result_1(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            re_set_most_recent_backup_result, &null_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDMRST_SetMostRecentBackup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     result = rpc_result_1->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             result = EP_RB_RECOVER_RPC_FAIL;
rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (poll_delay < RST_MAX_GET_ROBJS_DELAY) {</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     usleep( poll_delay );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    xdr_free( xdr_RE_status_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpc\_result\_1 = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       poll_delay *= 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (poll_delay > RST_MAX_GET_ROBJS_DELAY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           wait till next poll */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpc_args_.maxEntries = maxEntries; */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        poll_delay = RST_MAX_GET_ROBJS_DELAY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (char *)rpc_result_1 );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* .1 second */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             &null_args, svrHdl);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDMRST_GetAllBackupTimes ( serverHandle svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 112 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Function Description:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EDMRST_GetAllBackupTimes API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The cookie must be initialize to INIT_COOKIE on the first call to this routine. This routine will update the cookie to allow retrieval of more objects if there is more than "maxEntries". The cookie will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    returned as DONE_COOKIE when there are no more to retrieve
                                                                                                                                             rpc_result = re_get_all_backup_times_1( &rpc_args, svrHdl );
                                                                                                                                                                                                   set_rpc_obj( re_get_all_backup_times, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                          rpc_args.maxEntries = maxEntries;
                                                                                                                                                                                                                                                                                       rpc_args.flags = flags;
                                                                                                                                                                                                                                                                                                                   rpc_args.endTime = endTime;
                                                                                                                                                                                                                                                                                                                                           rpc_args.startTime = startTime;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rbe_log_debug_sub( 0, "EDMRST_GetAllBackupTimes called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RSTRPC_time_list
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_get_all_backup_times_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_get_all_backup_times_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      numEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               maxEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   flags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Retrieve the dates of the backups within the time range specified by the caller.
                                                                                      if (NULL == rpc_result)
                                                                                                                                                                                                                                 rpc_args.cookie = *cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cookie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   timesArray
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   endTime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              startTime
                                                                                                               /*pointer issues*/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                        timesArray==NULL || svrHdl==NULL || numEntries==NULL || cookie==NULL
                                                                                                                                                                                                                                                                                                                                                                                                                          || maxEntries <= 0)
                                result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                    return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       I) Backup constraint flags: e.g. full-only/partial-ok
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  - (I) A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRST_GetAllBackupTimes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        time_t *timesArray,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      const short maxEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               u_long flags,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               const time_t endTime,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   const time_t startTime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             operation completed successfully
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    long *cookie )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  short *numEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (IO) marker to specify whether or not this is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (I) ptr to array of time_t buffers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (0) count of times returned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (I) size of the array timesArray
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (I) include no earlier than this date
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the initial call
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   - (I) include no later than this date
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *rpc_result_1=NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     null_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *lnkPtr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                result;
Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fri Jan 04 14:40:00 2008
```

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```
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rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                             EDMRST_GetAllBackupTimes
                         Page 113 of 172
                     Fri Jan 04 14:40:00 2008
                       EDMRST_GetAllBackupTimes
```

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```
else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  if (E_SUCCESS != rpc_result->status) {
   result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                    if ( E_SUCCESS == result)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      while (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* poll for completion or error */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    result = EP_RB_RECOVER_RPC_INCOMPLETE
                                                                                                                                                                                                                                                                  for( indx=0;
                                                                                                                                                                                                                                                                                                                         lnkPtr = rpc_result_1->backupTimes,
                                                                                                                                                                                                                                                                                                                                                       *cookie = rpc_result_1->cookie;
                                                                                                                                                                                                                                                                                                                                                                                     *numEntries = rpc_result_1->numEntries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if (result == EP_RB_RECOVER_RPC_INCOMPLETE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 if (!rpc_result_1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           re_get_all_backup_times_result, &null_args.RPCobjID );
rpc_result_1 = re_get_all_backup_times_result_1(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            set_rpc_obj (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unsigned int poll_delay = 100000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     usleep( poll_delay );
if (poll_delay < RST_MAX_GET_ROBJS_DELAY) (</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 result = EP_RB_RECOVER_RPC_FAIL;
rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rpc_result_1 = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   xdr_free( xdr_RE_get_all_backup_times_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            result = rpc_result_1->status
                                                                                                                                                                   indx++, timesArray++ )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* wait till next poll */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                            (indx < maxEntries) && (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (poll_delay > RST_MAX_GET_ROBJS_DELAY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  poll_delay *= 2;
                                           is NULL,
                                                                 If we are in the for loop but the linked list ptr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpc_args_.maxEntries = maxEntries; */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      poll_delay = RST_MAX_GET_ROBJS_DELAY;
then some internal inconsistency has occurred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (char *)rpc_result_1 );
                                                                                                                                                                                            indx < rpc_result_1->numEntries );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* .1 second */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               &null_args, svrHdl);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Parameters:
```

```
EDMRST_GetCurrentTemplate( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Function Description:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EDMRST_GetCurrentTemplate API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This routine returns the name of the template that is used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        on whether or not the alternate trail is being used.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the currently selected top level object (work item) and the flag
                                                                                                                                                                                                                                              RE_get_current_template_result
                                                                                                                                                                                                                                                                         RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             E_SUCCESS - operation completed successfully
EP_RB_RECOVER_BAD_ARGS - invalid input argument
EP_RB_RECOVER_NO_CURR_TEMPLATE - no valid current
if ((NULL == template) || (NULL == alternate))
    return EP_RB_RECOVER_BAD_ARGS ;
                                                                                                                          if (NULL == svrHdl)
                                                                                                                                                                                    rbe_log_debug_sub( 0, "EDMRST_GetCurrentTemplate called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            alternate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      template
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            return result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* EDMRST_GetAllBackupTimes */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (rpc_result_1 != NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   xdr_free (xdr_RE_get_all_backup_times_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* release RPC result struct: contents and struct */
                                                                                            return EP_RB_RECOVER_INVALOP ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lnkPtr = lnkPtr->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *timesArray = lnkPtr->time;
                                                                                                                                                                                                                                                                                                                                                                                                   template_name_ty template,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (0) ptr to a preallocate boolean_ty var
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (0) ptr to a preallocated template_name_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (I) A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                   boolean_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (NULL == lnkPtr)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  break;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *numEntries = indx;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Restore Engine (server) connection.

    no valid current template

                                                                                                                                                                                                                                              *rpc_result;
                                                                                                                                                                                                                                                                            rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                svrHdl,
                                                                                                                                                                                                                                                                                                                                                                      *alternate )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    char *)rpc_result_1);
```

```
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}
else
{
```

```
/* EDMRST_GetCurrentTemplate */
                                                              return result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpc_result = re_get_current_template_1( &rpc_args, svrHdl );
if (!rpc_result) {
    result = EP_RB_RECOVER_RPC_FAIL;
    rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  set_rpc_obj( re_get_current_template, &rpc_args.RPCobjID );
                                                                                                                                                                                      /* release RPC result struct: contents and struct */
xdr_free (xdr_RE_get_current_template_result, (
                                                                                                                                                                                                                                                                                                                         strncpy(
                                                                                                                                                                                                                                                                                                                                                    result = rpc_result->status;
*alternate = rpc_result->alternate;
                                                                                                                                                                                                                                                                                     template, rpc_result->templateName, MAX_TEMPLATE_LEN );
                                                                                                                                                                char *)rpc_result);
```

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```
/*
* Epoch headers.
                                                                                                                                                                                                                                                                                                                          #include <sys/param.h>
#include <unistd.h>
                                                                                                                                                                                                                                                                                                                                                                 /*
* System headers.
                              #include <RSTsup_rpc.h>
#include <RSTsup_csm.h>
                                                                      #include <restore/restore_engine.h>
                                                                                     #include <RSTinterns.h>
                                                                                                                                                                                                          #include <eb/eb_port.h>
      Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #define
                                                                                                                               * Local headers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    #endif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             static char RCS_id [] = "$RCSfile$ "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          * Remove for non-POSIX, non-portable code.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           * The following is required for code that uses POSIX API's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   * Standard defines required to turn on OS features go here.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #ifndef lint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* The following provides an RCS id in the binary that can be located ** with the what(1) utility. The intent is to keep this short.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ** Compile-Time Options:
** This sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ** Copyright (c) 1998,1999 by EMC Corporation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Feature test switches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   File Name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   __EXTENSIONS___
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This module contains:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This section must list any compile time definitions which will affect this header.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RSTgtshost.c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -EDMRST_GetSourceHosts: The Restore API function, which retrieves the hosts which are restorable by a given user.
-EDMRST_GetBackupServers: The Restore API function which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for backup.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  retrieves the server hosts which have this host configured
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "$Revision$ "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "$Date$" ;
                                                                                                                                                                                                                                                                                                                            /* for MAXHOSTNAMELEN */
/* for gethostname */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* instead of _POSIX_SOURCE because of gethostname
                                                                                                                                                                                                                                                                                                                        for gethostname
 RSTgtshost.c 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 117 of 172
     Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*
* External declarations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*
*#defines, structures, typedefs local to this source file
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fri Jan 04 14:40:00 2008
RSTgtshost.c2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 118 of 172
```

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     EDMRST_GetSourceHosts
                        Fri Jan 04 14:40:00 2008
                        Page 120 of 172
*cookie = rpc_result->cookie;
                           EDMRST_GetSourceHosts
                             Fri Jan 04 14:40:00 2008
```

```
EDMRST_GetSourceHosts (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          returned as DONE_COOKIE when there are no more to retrieve.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   routine. This routine will update the cookie to allow retrieval of more objects if there are more than "maxEntries". The cookie will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The cookie must be initialized to INIT_COOKIE on the first call to this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hosts which are restorable by a given user
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This function is provided to allow retrieval of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               numberEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 maxEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                hostname
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         For a host to be restorable there must have been at least one successful backup.
                                                                            else
                                                                                                                                                                                                                                                                                 rpc_result = re_get_source_hosts_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                set_rpc_obj( re_get_source_hosts, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                            rpc_args.cookie =
                                                                                                                                                                                                                                                                                                                                                                                    rpc_args.maxEntries = maxEntries;
                                                                                                                                                                                                                                                                                                                                                                                                         /* Prepare input argument structure for RPC:
rpc_args.hostname = (char *)hostname;
                                                                                                     /* move results to caller's area, if successful: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RSTRPC_name_list
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_get_hosts_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE_get_hosts_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (svrHdl==NULL || hosts==NULL || numberEntries==NULL
|| cookie==NULL || maxEntries <= 0 )</pre>
                                                                                                                                                                              result = EP_RB_RECOVER_RPC_FAIL;
rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          return( EP_RB_RECOVER_BAD_ARGS );
if (rpc_result->status == E_SUCCESS)
                        result = rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (O)
(I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (IO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 serverHandle svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                const short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        const char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the real number of hosts returned in the array
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a pre-allocated array to return the hosts in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a place holder for the list position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the maximum number of hosts to return
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                If NULL, its a no-op. Otherwise, the list of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                              *cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the value of "hostname"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     recoverable hosts will be filtered based on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           meaningful to only the internals of the API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *temp_list;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                maxEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *hostname,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *cookie )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *numberEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       **hosts,
                                                                                                                                                                                NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the
                                                                                                                                                                                                      eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a call to the Dispatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRST_GetBackupServers:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return( result );
                                                                                                                                                                                                                                                                                                                                     cookie
                                                                                                                                                                                                                                                                                                                                                            hostname
                                                                          static long
                                                                                                     status;
                                                                                                                                                                                                                                                                                                                                     (OI)
(0)
                                                                                                                                                     long
```

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```
EDMRST_GetBackupServers ( hostname_ty hostname
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                servers can be queried to see if the current (local) host is one of its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         updated to determine the possible servers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               are possible, i.e., multiple EDM servers are possible,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       In this implementation, the restore gui can only run on the EDM server,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  so only the current host can be the backup server.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The cookie must be initialized to INIT_COOKIE on the first call to this routine. This routine will update the cookie to allow retrieval of more server names if there are more than one. The cookie will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 returned as DONE_COOKIE when there are no more to retrieve.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  servers which are configured to backup (and restore) this host.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This function is provided to allow retrieval, one at a time, of the
                             if (NULL == hostname | | NULL == cookie)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* End of EDMRST_GetSourceHosts() */
return EP_RB_RECOVER_BAD_ARGS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              xdr_free( xdr_RE_get_hosts_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* release RPC result struct: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if (rpc_result->numEntries)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               while ( rpc_result->numEntries )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  temp_list = rpc_result->hosts;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *numberEntries = rpc_result->numEntries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               result = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - Pointer to buffer to receive the server name output
                                                                                                   valid_cookie = INIT_COOKIE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          strcpy( *hosts++, temp_list->name );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Daemon, to get the list of EDM servers.
                                                                                                                                                                                                                                                                                                                                                                                                                                      a place holder for the list position
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpc_result->numEntries--;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                temp_list = temp_list->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 if (!temp_list
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* check for
                                                                                                                                                                                                                                                                                                                                                                                                   meaningful to only the internals of the API
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 !temp_list->name )
                                                                                                                                                                                                       *cookie )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           null pointer or too many returned */
it || !*hosts || !rpc_args.maxEntries--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Presumably,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (char *)rpc_result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     When other configurations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  this function must be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              this will be through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Then those
```

}
else if (*cookie == DONE_COOKIE | *cookie != valid_cookie)
 return EP_RB_RECOVER_BAD_COOKIE;
else { /* cant happen yet */
 return EP_RB_RECOVER_FATALERR;

return EP_RB_RECOVER_FATALERR;
*cookie = valid_cookie = DONE_COOKIE;

/* End of EDMRST_GetBackupServers() */

return E_SUCCESS;

```
Fri Jan 04 14:40:00 2008
```

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Page 123 of 172 Page 123 of 172 RSTgtshost.c 7 Fri Jan 04 14:40:00 2008 Page 124 of 172 Fri Jan 04 14:40:00 2008 Page 124 of 172 RSTgtshost.c8 Fri Jan 04 14:40:00 2008 Fri Jan 04 14:40:00 2008

```
#include <RSTsup_csm.h>
                                                          #include <RSTsup_rpc.h>
                                                                                                 #include <RSTinterns.h>
                                                                                                                                                                                                                           #include <eb/eb_port.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #endif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #ifndef lint
static char RCS_id [] = "$RCSfile$ "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* The following provides an RCS id in the binary that can be located ** with the what(1) utility. The intent is to keep this short. ^{\star\prime}
                                                                                   #include <restore/restore_engine.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ** Compile-Time Options:
This section must list any compile time definitions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         * * * * * * * * * * *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              #define
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                * Local headers
                                                                                                                                                                                                                                                                   * Epoch headers.
                                                                                                                                                                                                                                                                                                                                                                   * System headers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  * The following is required for code that uses POSIX API's. * Remove for non-POSIX, non-portable code.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * Feature test switches.
* Standard defines required to turn on OS features go here.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ** File Name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Copyright (c) 1998, 1999 by EMC Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Table of Contents:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _POSIX_SOURCE 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      API Functions:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Internal Functions:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    which will affect this header.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RSTgtdhost.c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRST_GetDestinationHosts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This module contains the Get Destination Hosts Restore API function.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "$Revision$ "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "$Date$" ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 125 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*
* External declarations
*/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*
* #defines, structures, typedefs local to this source file
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fri Jan 04 14:40:00 2008
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 126 of 172
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDMRST_GetDestinationHosts( serverHandle svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *******************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 127 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Get Destination Hosts:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            returned as DONE_COOKIE when there are no more to retrieve.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  routine. This routine will update the cookie to allow retrieval of more objects if there is more than "maxEntries". The cookie will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The cookie must be initialize to INIT_COOKIE on the first call to this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  by a given user.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hosts which are allowable destinations for the source host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This function is provided
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cookie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   numberEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  maxEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     svrHdl
                                                                                                                                                                                                                                                                                                                  /* move results to caller's area, if successful: */
else if (rpc_result->status == E_SUCCESS)
{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           if (!rpc_result) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rpc_result = re_get_destination_hosts_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        set_rpc_obj( re_get_destination_hosts, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rpc_args.cookie = *cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpc_args.maxEntries = maxEntries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpc_args.hostname = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RSTRPC_name_list
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_get_hosts_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* Prepare input argument structure for RPC: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_get_hosts_result
                                                                                                                                                                                      while ( rpc_result->numEntries )
                                                                                                                                                                                                              temp_list = rpc_result->hosts;
                                                                                                                                                                                                                                    *numberEntries = rpc_result->numEntries;
                                                                                                                                                                                                                                                                                          result = rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                        result = EP_RB_RECOVER_RPC_FAIL;
rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                               *cookie = rpc_result->cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (IO) - a place holder for the list position
                                                                             - a pre-allocated array to return the hosts in
                               strcpy( *hosts++, temp_list->name);
                                                                                                                                   /* check for null pointer or too many returned */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDMRST_GetDestinationHosts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the real number of hosts returned in the array
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the maximum number of hosts to return
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hostname_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               const short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     to allow retrieval of the
  RSTgtdhost.c3
                                                           break;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *temp_list;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *hosts,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               maxEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *cookie )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *numberEntries,
Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fri Jan 04 14:40:00 2008
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Page 128 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 return result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                End of EDMRST_GetDestinationHosts() */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          xdr_free( xdr_RE_get_hosts_result, (char *)rpc_result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* release RPC result struct: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       if (rpc_result->numEntries)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRST_GetDestinationHosts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   result = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpc_result->numEntries--;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     temp_list = temp_list->next;
RSTgtdhost.c 4
Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fri Jan 04 14:40:00 2008
```

```
#include <eb/eb_port.h>
#include <eb/rb_log.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #endif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   static char RCS_id [] =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            #ifndef lint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* The following provides an RCS id in the binary that can be located ** with the what(1) utility. The intent is to keep this short.
                                                                                                                                                                                                                                                                                                                                                              #define
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *
                                                                                                                                                                                                                                                       * System headers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      *
                                                                                                                                                                                                                                                                                                                                                                                                                                                         * The following is required for code that uses POSIX API's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ** Compile-Time Options:
                                                                                                                            * Epoch headers.
                                                                                                                                                                                                                                                                                                                                                                                                                                     * Remove for non-POSIX, non-portable code
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ** Copyright (c) 1998,1999 by EMC Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Standard defines required to turn on OS features go here.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Feature test switches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         API functions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            server/libs/recover/grandfathered/cmd_markunmark.c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOTE: Part of this module is adapted from:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    It contains mainly support routines needed by the mark and unmark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Table of Contents:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              File Name:
                                                                                                                                                                                                                                                                                                                                                              _POSIX_SOURCE 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Internal Functions:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    API Functions:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RSTmarkunm.c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDMRST_GetMarkResults
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDMRST_GetUnmarkResults
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDMRST_UnmarkObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRST_GetMarkedTotalSize
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDMRST_MarkObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This module contains the Restore API functions to mark and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unmark objects for restoral.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "$RCSfile$ "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "$Revision$
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     '$Date$" ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 129 of 172
                                                                                                                                                                                                                                                                                                                                        EDMRST_MarkObject ( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /*
* External declarations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NEW_SRC_FILE();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*
* Local headers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #include <RSTsup_csm.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #include <RSTinterns.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  * Local function prototypes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         * #defines, structures, typedefs local to this source file
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   * EDMRST_MarkObject()
                                                                                                                                                                                                                                                                                                                                                                                                                      Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           descend
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 allow Badfiles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  thisObject (I) - The input object to mark, must be of type file or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   restoral based on the input criteria. A second function, EDMRST_GetMarkResults, is used to test for completion of the mark.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This function is passed a restorableObject and begins to mark files for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3) For Witems thisObject an error condition will be returned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and if the descend parameter is true then the mark applies to all the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1) For files thisObject is the represents the target file to be marked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contents of the directory.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2) For directories thisObject represents the directory to be recovered
                                                                                                                          RE_mark_object_args
RSTRPC_restorable_obj_root
                                                                                                    eerrno_ty
                                                                                                                                                                              RE_mark_object_result
                                              rbe_log_debug_sub( 0, "EDMRST_MarkObject called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (I) - A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 specified, leaves selected backup time unchanged (I) - allows marking of files of state BADDATA.
                                                                                                                                                                                                                                                                                       time_t
                                                                                                                                                                                                                                                                                                             restorableObjectPtr
                                                                                                                                                                                                                               boolean_ty
                                                                                                                                                                                                                                                         boolean_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Should mark operation descend
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (optional) the backup time to perform the mark on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       if not specified, uses currrently selected backup; if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of directories.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             directory (not a top level object) .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRST_MarkObject
                                                                                                      *temp_robj;
result = E_SUCCESS;
                                                                                                                                                                                                                                                                                                             thisObject,
                                                                                                                                                                                                                                                                                                                                        svrHdl,
                                                                                                                                                                                                                                   descend )
                                                                                                                                                                                                                                                            allowBadFiles,
                                                                                                                                                                                                                                                                                         time,
                                                                                                                                                       rpc_args;
                                                                                                                                                                                *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               to operate on the contents
Page 130 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 130 of 172
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RSTmarkunm.c 1

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RSTmarkunm.c 2

```
else
                                                                      return( result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* validate input object type as NOT top level */
if ( (temp_robj->objLevel != RSTRPC_leaf_type)
/* end of EDMRST_MarkObject () */
                                                                                                                                                                                                                                                                                                                                                                                                                           if (!rpc_result) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpc_result = re_mark_object_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              set_rpc_obj( re_mark_object, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpc_args.backupTime = time;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpc_args.descend = descend;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc_args.allowBadFiles = allowBadFiles;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpc_args.thisObj = (RSTRPC_user_restorable_object *)temp_robj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* Prepare input argument structure for RPC: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     if ( NULL == temp_robj
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    temp_robj = ((restorableObject *)thisObject)->rpcObjPtr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* validate input object type as RESTORABLE_OBJECT */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if (thisObject==NULL |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     && (temp_robj->objLevel != RSTRPC_container_type) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | RESTORABLE_OBJECT !=
                                                                                                                                                                                                                                                                                                                                                  rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                       xdr_free( xdr_RE_mark_object_result,
                                                                                                                                                                                                         result = rpc_result->status;
/* release RPC result struct: */
                                                                                                                                                                                                                                                                                                                                                                                      result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        if (temp_robj->objLevel != RSTRPC_tlo_type)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           return EP_RB_RECOVER_INVAL_OBJTYPE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   return( EP_RB_RECOVER_INVALOP );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return( EP_RB_RECOVER_INVAL_OBJTYPE );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ((restorableObject *)thisObject)->restoreObjType )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   svrHdl==NULL )
                                                                                                                                                                             (char *)rpc_result);
```

```
EDMRST_GetMarkResults(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      previously started mark operation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRST_GetMarkResults()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 otherMarked (0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          dirMarked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BadFilesCount (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fileMarked (0) -- return the total files marked after this mark occurred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PermDenyFilesCount (0) -- returns the file count with permission denied
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       interrupt
                                                                                                                                       else
                                                                                                                                                                                                                                               if (!rpc_result) {
                                                                                                                                                                                                                                                                                                   rpc_result = re_get_mark_results_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                             set_rpc_obj( re_get_mark_results,
                                                                                                                                                                                                                                                                                                                                                     rpc_args.interrupt = interrupt;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rbe_log_debug_sub( 0, "EDMRST_GetMarkResults called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RE_get_mark_results_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_get_mark_results_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ( svrHdl==NULL || BadFilesCount==NULL
| fileMarked==NULL || PermDenyFilesCount==NULL
| dirMarked==NULL || otherMarked==NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     function tests for completion and retrieves the results of
                                                                                                                                                                                        rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (I) -
                                                                                result = rpc_result->status;
if (result == E_SUCCESS)
                                                                                                                                    /* move results to caller's area,
                                                                                                                                                                                                                  result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                           return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -- return the total directories marked after this mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bitfiles that were not marked.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0) --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (I) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -- return the total "other" files marked after this mark.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A pointer to this user's client handle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               returns the file count of bitfiles marked with BADDATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       boolean_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         descendants of the marked object may be marked or not.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   requests cancellation of the mark (if TRUE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     afterwards.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WARNING: If the operation is aborted, the mark will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               It is up to the caller to determine how to proceed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   left in an unknown state.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  u_long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             u_long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         prot_n_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   u_long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             n__tong
*PermDenyFilesCount = rpc_result->permDenyFileCount;
                            *BadFilesCount = rpc_result->badFileCount;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             interrupt,
 *BadFilesCount,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             result = E_SUCCESS ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *otherMarked )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *dirMarked,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *fileMarked,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *PermDenyFilesCount,
                                                                                                                                                                                                                                                                                                                           &rpc_args.RPCobjID );
                                                                                                                                                                                           NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   That is, any one of the
                                                                                                                                       if successful: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the
```

*dirMarked = rpc_result->dirMarkCount;

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/* release RPC result struct: */
                                                                                   *otherMarked = rpc_result->otherMarkCount;
                                                                                                              *fileMarked = rpc_result->fileMarkCount;
                                                                                                                                                  EDMRST_GetMarkResults
                                                                                                                                                Page 133 of 172
                                                                                                                                                  Fri Jan 04 14:40:00 2008
                                                                                     else
                                                          return( EP_RB_RECOVER_INVALOP );
                                                                                                              return( EP_RB_RECOVER_INVAL_OBJTYPE );
                                                                                                                                                EDMRST_UnmarkObject
                                                                                                                                                  Page 134 of 172
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```
eerrno_ty EDMRST_UnmarkObject( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UnmarkObject Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UnmarkObject() and GetUnmarkResults()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    backupTime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BadFilesOnly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 thisObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GetUnmarkResults is called to test for completion of the unmark operation, and receive results when it is done. It can also be used to interrupt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the unmark operation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and returns.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            asynchronous operation in the Restore Engine to perform the unmarking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UnmarkObject operates like MarkObject, in that it is supported through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         two API calls -- UnmarkObject and GetUnmarkresults.
                                                                                                                                                                                                              /* validate input object type as RESTORABLE_OBJECT */
temp_robj = ((restorableObject *)thisObject)->rpcObjPtr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RSTRPC_restorable_obj_root
if (NULL == temp_robj || RESTORABLE_OBJECT !=
                                                                                                                                                                                                                                                                                                                                    if (thisObject==NULL || svrHdl==NULL )
                                                                                                                                                                                                                                                                                                                                                                                                                             rbe_log_debug_sub( 0, "EDMRST_UnmarkObject called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_unmark_object_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_mark_object_result
                                                             /* validate input object type as NOT top level */
                                                                                                                                                                                                                                                                                                                                                                     /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   return( result );
                                                                                                                           return EP_RB_RECOVER_INVAL_OBJTYPE;
                                                                                                                                                                                                                                                                                                            return ( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ******************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      xdr_free( xdr_RE_get_mark_results_result, (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (T)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (I) - A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (I) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Should unmark operation descend to operate on the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        specified, leaves selected backup time unchanged allows unmarking ONLY of files of state BADDATA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The restoral object; can be a leaf object (e.g. a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     content of container objects.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       file), or a container object (e.g., a directory).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (optional) the backup time to perform the unmark on --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      if not specified, uses currrently selected backup;
                                                                                                                                                      ((restorableObject *)thisObject)->restoreObjType )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               boolean_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 boolean_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            restorableObjectPtr thisObject,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             result = E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *temp_robj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       descend )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BadFilesOnly,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             svrHd1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               backupTime
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unmark starts an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         char *)rpc_result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 svrHd1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         else
```

if (temp_robj->objLevel != RSTRPC_tlo_type)

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eerrno_ty EDMRST_GetUnmarkResults ( serverHandle svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* end of EDMRST_UnmarkObject () */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GetUnmarkResults Parameters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       otherMarked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dirMarked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BadFilesCount (0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fileMarked
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         interrupt
if ( svrHdl==NULL || BadFilesCount==NULL || fileMarked==NULL
|| dirMarked==NULL || otherMarked==NULL
                                                                                                              rbe_log_debug_sub( 0, "EDMRST_GetUnmarkResults called" );
                                                                                                                                                                                                    RE_get_mark_results_args
                                                                                                                                                                                                                                  RE_get_unmark_results_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   return( result );
                                                         /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if (!rpc_result) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rpc_result = re_unmark_object_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    set_rpc_obj( re_unmark_object, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpc_args.backupTime = backupTime;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpc_args.descend = descend;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpc_args.badFilesOnly = BadFilesOnly;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpc_args.thisObj = (RSTRPC_user_restorable_object *)temp_robj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* Prepare input argument structure for RPC: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   xdr_free( xdr_RE_mark_object_result, (char *)rpc_result);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    result = rpc_result->status;
/* release RPC result struct: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0) - return the total files marked after this mark occurred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Restore Engine (server) connection.
(I) - requests cancellation of the unmark (if TRUE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (0) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (I) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              - return the total directories marked after this mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       return the total "other" files marked after this mark.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    returns the file count with BADDATA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proceed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       descendants of the unmarked object may be marked or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                be left in an unknown state.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WARNING: If the operation is aborted, the unmark will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               afterwards.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is up to the caller to determine how to
                                                                                                                                                                                                                                                                                      u_long
                                                                                                                                                                                                                                                                                                                     u_long
                                                                                                                                                                                                                                                                                                                                                u_long
                                                                                                                                                                                                                                                                                                                                                                         u_long
                                                                                                                                                                                                                                                                                                                                                                                                        boolean_ty
                                                                                                                                                                                                      rpc_args;
                                                                                                                                                                             result = E_SUCCESS
                                                                                                                                                                                                                                    *rpc_result;
                                                                                                                                                                                                                                                                                         *otherMarked )
                                                                                                                                                                                                                                                                                                                     *dirMarked,
                                                                                                                                                                                                                                                                                                                                                *fileMarked,
                                                                                                                                                                                                                                                                                                                                                                              *BadFilesCount,
                                                                                                                                                                                                                                                                                                                                                                                                          interrupt,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  That is, any one of the
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return( EP_RB_RECOVER_BAD_ARGS );
                            EDMRST_GetUnmarkResults
                          Fri Jan 04 14:40:00 2008
                          Page 136 of 172
                            EDMRST_GetMarkedTotalSize
                            Fri Jan 04 14:40:00 2008
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EDMRST_GetMarkedTotalSize( serverHandle svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       size is the sum-of-the-length the marked files and is one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This function is provided to allow retrieval of the Total size of the marked files.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDMRST_GetMarkedTotalSize ()
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                measure of size. This is an approximation.
                                                                                                                                                   else {
                                                                                                                                                                                                                                                              if (!rpc_result) {
                                                                                                                                                                                                                                                                                                                                                                                                        /* validate args first: */
if ( svrHdl==NULL || totalSize==NULL )
    return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     else {
                                                                                                                                                                                                                                                                                                                         rpc_result = re_get_marked_total_size_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                     set_rpc_obj( re_get_marked_total_size, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_get_marked_total_size_result RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rbe_log_debug_sub( 0, "EDMRST_GetMarkedTotalSize called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           return( result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if (!rpc_result) {
    result = EP_RB_RECOVER_RPC_FAIL;
    rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpc_result = re_get_unmark_results_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    set_rpc_obj( re_get_unmark_results, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpc_args.interrupt = interrupt;
                                                                                                                                                                                                         result = EP_RB_RECOVER_RPC_FAIL;
rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                             result = rpc_result->status;
                                                                                         if (result == E_SUCCESS)
                                                                                                                                                 /* move results to caller's area, if successful: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* move results to caller's area, if successful: */
result = rpc_result->status;
if (result == E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /* release RPC result struct: */
                              totalSize->high = rpc_result->total.high;
totalSize->low = rpc_result->total.low;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *otherMarked = rpc_result->otherMarkCount;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *fileMarked = rpc_result->fileMarkCount;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *dirMarked = rpc_result->dirMarkCount;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *BadFilesCount = rpc_result->badFileCount;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   result = E_SUCCESS ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *totalSize )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      `* ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRST_GetMarkedTotalSize */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              return( result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* release RPC result struct: */
xdr_free( xdr_RE_get_marked_total_size_result,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (char *)rpc_result );
```

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** Compile-Time Options:
This section must list any compile time definitions
** which will affect this header.
                                                           static char RCS_id [] =
#endif
                                                                                 #ifndef lint
                                                                                                                                            /* The following provides an RCS id in the binary that can be located ** with the what(1) utility. The intent is to keep this short.
                                                                                                                                                                                                                                                                                                                                                                             * * * * * *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
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* *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ** public functions contained in:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Copyright (c) 1998,1999 by EMC Corporation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ** File Name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               static functions NO LONGER contained here:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Table of Contents:
                                                                                                                                                                                                                                                                                                                                                                                                                   MediaObjectConstructor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           {\it EDMRST\_GetDupilcateLocation}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EDMRST_GetDupilcateTypeToken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDMRST_GetDupilcateTypeDescription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDMRST_GetDupilcateSequenceNumber
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDMRST_GetDupilcateVolid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDMRST_GetMediaComments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          {\it EDMRST\_GetMediaLocation}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRST_GetMediaDescription
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_GetMediaSequenceNumber
                                                                                                                                                                                                                                                                                                                                                                                               validateMediaObject
                                                                                                                                                                                                                                                                                                                                                                                                                                         AssignMediaObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                              InitializeMediaObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_GetDupilcatetTrail
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDMRST_GetDupilcateStatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EDMRST_GetDupilcateBarcodeString
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDMRST_GetNumberOfDuplicates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDMRST_GetMediaTrail
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EDMRST_GetMediaStatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EDMRST_GetMediaBarcodeString
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EDMRST_GetMediaSide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDMRST_GetMediaLabel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDMRST_GetMediaVolid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               media list is updated in EDMRST_MarkObject()
and EDMRST_UnmarkObject().
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDMRST_GetNecessaryMedia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the information of the media needed for restore access. This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This module contains the Restore API functions that provide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RSTmedia.c
                                                           "$RCSfile$ "
                                    "$Revision$ "
                    '$Date$" ;
                                                                                                                                                                                  NEW_SRC_FILE();
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #include <RSTsup_csm.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*
* System headers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #include <RSTinterns.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #include <ebutil/ebutil.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #include <eb/eb_port.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #include <ebreport/ebvl.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #include <eb/rb_log.h>
                                                                                                                                                                                                                                                                                                                                                                             * Local function prototypes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * External declarations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        #define
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     * Local headers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                * Epoch headers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _POSIX_SOURCE 1
```

```
static eerrno_ty copy_rpc_media_obj( mediaObject *dest,
                                                                                                                                                                       static eerrno_ty CheckMediaObjects( const short maxEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * #defines, structures, typedefs local to this source file
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 * Remove for non-POSIX, non-portable code
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The following is required for code that uses POSIX API's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Standard defines required to turn on OS features go here.
                                                                                                                                 mediaObject **objects );
RSTRPC_media_object *src );
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RSTmedia.c 2

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EDMRST_GetNecessaryMedia ( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* public functions */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  **********************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 139 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Get Necessary Media:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 this routine. This routine will update the cookie to allow retrieval of more objects if there is more than "maxEntries". The cookie will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The cookie must be initialize to INIT_COOKIE on the first call to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     necessary media to restore the currently marked objects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This function is provided to allow retrieval of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         returned as DONE_COOKIE when there are no more to retrieve.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cookie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                numberEntries (0) - the real number of media objects returned in the array
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             objects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           maxEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RSTRPC_media_list
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RE_get_necessary_media_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RE_get_necessary_media_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* Prepare input argument structure for RPC: */
                                                                                                                                                                                                                                                                            if (!rpc_result) {
    result = E
                                                                                                                                                                                         else {
                                                                                                                                                                                                                                                                                                                                                                                                                             set_rpc_obj( re_get_necessary_media, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpc_args.all = all,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpc_args.cookie = *cookie;
                                                                                                                                                                                                                                                                                                                                                                     rpc_result = re_get_necessary_media_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpc_args.maxEntries = maxEntries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             H
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* validate inputs; */
if (NULL == svrHdl | | NULL == numberEntries | | NULL == cookie | |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (E_SUCCESS != (result = CheckMediaObjects( maxEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      maxEntries <= 0 )
                                                                                                                                                 if ( (result = rpc_result->status) == E_SUCCESS)
                                                                                                                                                                                                                                               result = EP_RB_RECOVER_RPC_FAIL;
rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     return EP_RB_RECOVER_BAD_ARGS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IO)- a place holder for the list position
                                temp_list = rpc_result->mediaList;
                                                             *numberEntries = rpc_result->numEntries;
                                                                                           *cookie = rpc_result->cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (0) - an allocated array to return the objects in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (I) - the maximum number of media objects to return
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (I) - a pointer to this user's client handle for the
while ( rpc_result->numEntries && result == E_SUCCESS )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDMRST_GetNecessaryMedia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   const short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           short
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mediaObjectPtr *objects,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           boolean_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      maxEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               result = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *temp_list;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             all,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *numberEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *cookie )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (mediaObject **)objects)))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The cookie will be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                             static eerrno_ty copy_rpc_media_obj( mediaObject *dest,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             static eerrno_ty
CheckMediaObjects(const short maxEntries.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 140 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         return E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 μĖ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       register int index;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for (index = 0; index < maxEntries; index++)</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (NULL == objects)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 return EP_RB_RECOVER_BAD_ARGS;
                          if ( NULL == (dest->mtype_token = esl_strdup( src->mtype_token )) )
                                                                                                                                                                                                                                                                                                                                       if ( NULL == (dest->trail = esl_strdup( src->trail )) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if (NULL == objects[index]
                                                                                                                                                                                    if ( NULL == (dest->mtype = esl_strdup( src->mtype )) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* EDMRST_GetNecessaryMedia */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             || MEDIA_OBJECT != objects[index]->restoreObjType)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CheckMediaObjects */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       return EP_RB_RECOVER_BAD_ARGS;
                                                                                                                           rec_api_log_csm(SUB_CSM_NOMEM, NULL);
                                                                                                                                                                                                                                               return EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                               rec_api_log_csm(SUB_CSM_NOMEM, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /* release RPC result struct: */
                                                                                           return EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  xdr_free( xdr_RE_get_necessary_media_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mediaObject **objects)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpc_result->numEntries--;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   temp_list = temp_list->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if (!temp_list | | !*objects | | !rpc_args.maxEntries--
| | !temp_list->media_obj )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* copy list object to array object entry:
result = copy_rpc_media_obj( *objects,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_GetNecessaryMedia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* copy the duplicates for EACH media object
* into the media list stored in each original
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          * media object
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (char *)rpc_result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              break;
                                                                                                                                                                                                                                                                                                                                                                                                RSTRPC_media_object *src )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* some null pointer or too many */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     temp_list->media_obj );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fri Jan 04 14:40:00 2008
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```
dst_list_pointer = dest->dups;
                                                                                                                                                                                                    eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                               copy_rpc_media_dups( mediaObject *dest
                                                                                                                                                                                                                                                                                                                                                                                                                                    static eerrno_ty
                                                                                                                                                                                                                                                                                                               struct mediaObjectList
  Fri Jan 04 14:40:00 2008
                                                                                                                                              dest->dups=calloc(1,sizeof(struct mediaObjectList));
                                                                                                                                                                                                                                                     struct RSTRPC_media_list *src_list_pointer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   copy_rpc_media_dups
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       goes through the list of duplicates from the RSTRPC_media_object
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 return E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dest->num_dups = src->num_dups;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dest->run_media_dup = src->run_media_dup,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      dest->is_orig = src->is_orig;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    dest->offsite = src->offsite;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dest->online = src->online;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       dest->lmtime = src->lmtime;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dest->side = src->side;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if ( NULL == (dest->volid_ascii = esl_strdup( src->volid_ascii )) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* added this to copy the number of duplicates */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dest->seqno = src->seqno;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           if ( NULL == (dest->luname = esl_strdup( src->luname
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if ( NULL == (dest->comments = esl_strdup( src->comments )) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if ( NULL == (dest->physical_loc = esl_strdup( src->physical_loc )) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       μ. ~
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ( NULL == (dest->barcode_label = esl_strdup(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rec_api_log_csm(SUB_CSM_NOMEM, NULL);
return EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rec_api_log_csm(SUB_CSM_NOMEM, NULL);
return EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rec_api_log_csm(SUB_CSM_NOMEM, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rec_api_log_csm(SUB_CSM_NOMEM, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rec_api_log_csm(SUB_CSM_NOMEM, NULL);
return EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rec_api_log_csm(SUB_CSM_NOMEM, NULL);
return EP_RB_RECOVER_NOMEM;
                                                                                                                                                                                                                                                                                                                                                                                     struct RSTRPC_media_object *src
                                                                                                                                                                                                                                                              *dst_list_pointer;
/* The list of objects to be copied to
                                                                                                                                                                                                    result=E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  copy_rpc_media_obj
    RSTmedia.c 5
                                                                                                                                                                                                                           /* List of objects to be copied from */
                                                                                                                  /* creates the first list item
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      src->barcode_label )) )
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 141 of 172
                                                                                                                    *
                                                                                                                                                                                                                                                                                 *
                              EDMRST_GetMediaLUName ( serverHandle
                                                            const char *
                                                                                                                                                                                                                                                                                                                                                         const char *
    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              return result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       while (src_list_pointer!=NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             src_list_pointer = src->dups;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* traverse the source media list
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RETURNS one of the following:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Media Object Access Routines:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             For the duplicate functions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Parameters.
                                                                                                             return ((mediaObject *)thisObject)->volid_ascii;
/* EDMRST_GetMediaVolid */
                                                                                                                                                                                                                                                                                                 if ( (NULL == svrHdl) | (NULL == thisObject)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dup_number (I) - The number of the duplicate to retrieve from usually
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     thisObject (I) - The media object
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 These routines retrieve information pertinent to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   else /* no more to copy */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 if (src_list_pointer != NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  src_list_pointer=src_list_pointer->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if (result != E_SUCCESS)
                                                                                                                                                                                                                                                     (MEDIA_OBJECT != ((mediaObject *)thisObject)->restoreObjType)
                                                                                                                                                                                                                                                                              (NULL == handlePtr) |
                                                                                                                                                                                                 return NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MediaStatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           const char *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dst_list_pointer->next=NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      dst_list_pointer=dst_list_pointer->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                dst_list_pointer->next=calloc(1,sizeof(struct mediaObjectList));
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (I) - (ignored) A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 for now, until multiple duplicates can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Restore Engine (server) connection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pointer to a string within the media object,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  media sequence number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       not be changed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* if the copy had
                                                                                                                                                                                                                                                                              (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        media side
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* if we still have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              copy_rpc_media_dups
    RSTmedia.c 6
                                   svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* move to the next media object */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    src_list_pointer->media_obj);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  an error
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a given Media object.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   more to copy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lets exit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            be made
    Page 142 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 142 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   that should
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                                                                                     mediaObjectPtr thisObject )
                                                                                                                                EDMRST_GetMediaLUName
                                                                                                                              Fri Jan 04 14:40:00 2008
                                                                                                                              Page 144 of 172
                        if ( (NULL == svrHd1) || (NULL == thisObject)
| (NULL == handlePtr) || (svrHd1 != handlePtr->re_binding_handle)
(MEDIA_OBJECT != ((mediaObject *)thisObject)->restoreObjType)
                                                                                                                                EDMRST_GetMediaTypeDescrip
                                                                                                                                   Fri Jan 04 14:40:00 2008
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const char *
  EDMRST_GetMediaSequenceNumber( serverHandle svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EDMRST_GetMediaSide ( serverHandle svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            uchar_t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDMRST_GetMediaTrail( serverHandle svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               const char *
                                                                                                                                                                        return ((mediaObject *)thisObject)->barcode_label;
                                                                                                                                                                                                                                                                                                   if ( (NULL == svrHdl) || (NULL == thisObject)
| (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
| (MEDIA_OBJECT != ((mediaObject *)thisObject)->restoreObjType)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   return (long)((mediaObject *)thisObject)->seqno;
/* EDMRST_GetMediaSequenceNumber */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if ( (NULL == svrHd1) || (NULL == thisObject)
|| (NULL == handlePtr) || (svrHd1 != handlePtr->re_binding_handle)
|| (MEDIA_OBJECT != ((mediaObject *)thisObject)->restoreObjType)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if ( (NULL == svrHdl) || (NULL == thisObject)
|| (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
|| (MEDIA_OBJECT != ((mediaObject *)thisObject)->restoreObjType)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return ((mediaObject *)thisObject)->side;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         return ((mediaObject *)thisObject)->trail;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  return ((mediaObject *)thisObject)->luname;
/* EDMRST_GetMediaVolid */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            if ( (NULL == svrHdl) || (NULL == thisObject)
| (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
| (MEDIA_OBJECT != ((mediaObject *)thisObject)->restoreObjType)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ((NULL == svrHdl) | (NULL == thisObject)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MEDIA_OBJECT != ((mediaObject *)thisObject)->restoreObjType)
                                                                                                                                                                                                                                        return NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return NULL;
                                                                                                                                  /* EDMRST_GetMediaBarcodeString
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               return NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EDMRST_GetMediaTrail
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDMRST_GetMediaSide */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mediaObjectPtr thisObject )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mediaObjectPtr thisObject )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mediaObjectPtr thisObject )
                                                                                                                                                                                                                                                                        EDMRST_GetMediaLocation( serverHandle svrHdl, mediaObjectPtr thisObject
                                                                                                                                                                                                                                                                                                                                     const char *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MediaStatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDMRST_GetMediaTypeToken ( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          const char *
                                                                                                                                  if ( (NULL == svrHdl) || (NULL == thisObject)
| (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
| (MEDIA_OBJECT != ((mediaObject *)thisObject)->restoreObjType)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else if (!(((mediaObject *)thisObject)->offsite))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if ( (NULL == svrHdl) || (NULL == thisObject)
| (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
| (MEDIA_OBJECT != ((mediaObject *)thisObject)->restoreObjType)
return ((mediaObject *)thisObject)->physical_loc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               return ((mediaObject *)thisObject)->mtype_token;
/* EDMRST_GetMediaTypeToken */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  if ( (NULL == svrHd1) || (NULL == thisObject)
|| (NULL == handlePtr) || (svrHd1 != handlePtr->re_binding_handle)
|| (MEDIA_OBJECT != ((mediaObject *)thisObject)->restoreObjType)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (((mediaObject *)thisObject)->online
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   return ((mediaObject *)thisObject)->mtype;
/* FUMPST CAFMediaTypeDescrip */
                                                                     return NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           return Media_Offsite;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           return Media_Offline,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              return Media_Online;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              return Media_Offline;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    return NULL;
                                                                                                                                                                                                                                                                                                                                                                                                        /* EDMRST_GetMediaStatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          return NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * offsite & offline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* EDMRST_GetMediaTypeDescrip
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 * offline & onsite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       serverHandle svrHdl,
mediaObjectPtr thisObject )
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long

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EDMRST_GetDuplicateVolid( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            const char *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    short EDMRST_GetNumberOfDuplicates ( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*******************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * Duplicate Media Access Routines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRST_GetMediaComments ( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 const char *
return dupObject->volid_ascii;
                                                                               dupObject = (mediaObject *) dupObjectList->media_obj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* Make sure we have something to work with */
if ( (NULL == svrHdl) || (NULL == thisObject)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fri Jan 04 14:40:00 2008
                          /* return the volid */
                                                                                                                       /* get the media object */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dupObjectList = dupObject->dups; /* Points to First mediaObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               short curr_dup=0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          struct mediaObjectList
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mediaObject
                                                                                                                                                                                                                                                                                                       /* get to specified Object, but already at first one */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mediaObject *tempObj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    return tempObj->num_dups;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tempObj = (mediaObject *)thisObject;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Inputs: Svr Handle - see above
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 return ((mediaObject *)thisObject)->comments;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if ( (NULL == svrHdl) || (NULL == thisObject)
|| (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
|| (MEDIA_OBJECT != (mediaObject *)thisObject)->restoreObjType)
                                                                                                                                                                                                                                                                       (curr_dup=1; curr_dup<dup_number; curr_dup++)
                                                                                                                                                                                                               dupObjectList = dupObjectList->next;
                                                                                                                                                                                                                                                                                                                                                                                                                          (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              return NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* EDMRST_GetMediaComments */
                                                                                                                                                                                                                                                                                                                                                                                                                                                       (dup_number >dupObject->num_dups)
                                                                                                                                                                                                                                                                                                                                                                                             (MEDIA_OBJECT != (dupObject->restoreObjType)))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* EDMRST_GetMediaLocation */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *dupObject;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mediaObjectPtr thisObject )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *dupObjectList;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mediaObjectPtr thisObject )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  int dup_number,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_GetMediaLocation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mediaObjectPtr thisObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * duplicate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the variable becomes the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               further down */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page 145 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDMRST_GetDuplicateSequenceNumber ( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              const char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRST_GetDuplicateLUName( serverHandle
                                                                                                                                                                                                                                          if ( (NULL == svrHdl) | (NULL == thisObject)
                                                                                                                                                                                                                                                                                                                                  dupObjectList = dupObject->dups; /* Points to First mediaObject */
                                                                                                                                                                                                                                                                                                                                                                                                                                                             dupObject = (mediaObject *)thisObject; /* kinda cheating here,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       short curr_dup=0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    struct mediaObjectList
                          for (curr_dup=1;curr_dup<dup_number; curr_dup++)
                                                                                                                                                                                                                                                                     /* Make sure we have something to work with */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          return dupObject->luname;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    dupObject = (mediaObject *) dupObjectList->media_obj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for (curr_dup=1; curr_dup<dup_number; curr_dup++)
                                                       /* get to specified Object, but already at first one ^{*}/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* return the volid */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if ( (NULL == svrHdl) |  (NULL == thisObject)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dupObjectList = dupObject->dups;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      dupObject = (mediaObject *)thisObject; /* kinda cheating here.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    short curr_dup=0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              struct mediaObjectList
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* get the media object */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* get to specified Object, but already at first one */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* Make sure we have something to work with */
                                                                                                                     return 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    return NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            dupObjectList = dupObjectList->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* EDMRST_GetDuplicateVolid */
                                                                                                                                                                                  (NULL == handlePtr) | (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                                                                                               (dup_number >dupObject->num_dups)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                               (MEDIA_OBJECT != (dupObject->restoreObjType)))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* EDMRST_GetDuplicateVolid */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (MEDIA_OBJECT != (dupObject->restoreObjType)))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (dup_number >dupObject->num_dups)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *dupObject;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *dupObject;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *dupObjectList;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *dupObjectList;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mediaObjectPtr thisObject )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 int dup_number,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EDMRST_GetDuplicateVolid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* Points to First mediaObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mediaObjectPtr thisObject )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          int dup_number,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    svrHdl,
                                                                                                                                                                                                                                                                                                                                                                  * the variable becomes the 
* duplicate further down */
                                                                                                                                                                                                                                                                                                                                                                                                                               * this is the original, but
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * duplicate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            * this is the original,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * the variable becomes the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 further down */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 146 of 172
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EDMRST_GetDuplicateTypeDescrip ( serverHandle
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               const char *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Page 147 of 172
Page 147 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           if ( (NULL == svrHdl) | | (NULL == thisObject)
                                                                                                                                        dupObjectList = dupObject->dups; /* Points to First mediaObject
                                                                                                                                                                                                                                                       dupObject = (mediaObject *)thisObject; /* kinda cheating here,
                                                                                                                                                                                                                                                                                                             short curr_dup=0;
                                                                                                                                                                                                                                                                                                                                     struct mediaObjectList
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dupObject = (mediaObject *) dupObjectList->media_obj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for (curr_dup=1;curr_dup<dup_number; curr_dup++)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* Make sure we have something to work with */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         dupObjectList = dupObject->dups; /* Points to First mediaObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            short curr_dup=0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      struct mediaObjectList
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mediaObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        return dupObject->seqno;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 return dupObject->barcode_label;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* get to specified Object, but already at first one */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dupObject = (mediaObject *) dupObjectList->media_obj;
                                                                                       /* Make sure we have something to work with */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dupObjectList = dupObjectList->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      dupObjectList = dupObjectList->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (NULL == svrHdl) || (NULL == thisObject)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* EDMRST_GetDuplicateSequenceNumber */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* EDMRST_GetDuplicateBarcodeString */
                              (dup_number >dupObject->num_dups)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (MEDIA_OBJECT != (dupObject->restoreObjType)))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (dup_number >dupObject->num_dups)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *dupObject;
                                                                                                                                                                                                                                                                                                                                                               *dupObject;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDMRST_GetDuplicateSequenceNumber
                                                                                                                                                                                                                                                                                                                                     *dupObjectList;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *dupObjectList;
    RSTmedia.c 11
                                                                                                                                                                                                                                                                                                                                                                                                                mediaObjectPtr thisObject )
                                                                                                                                                                                                                                                                                                                                                                                                                                        int dup_number,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mediaObjectPtr thisObject )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  int dup_number,
                                                                                                                                                                         * duplicate
                                                                                                                                                                                                   * the variable becomes the
                                                                                                                                                                                                                             * this is the original, but
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        duplicate further down */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               svrHdl,
                                                                                                                                                                         further down */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fri Jan 04 14:40:00 2008
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           const char *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 148 of 172
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                                                                                                                                                                                                                                                       EDMRST_GetDuplicateStatus( serverHandle
                                                                                                                                                                                                                                                                                        MediaStatus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* Make sure we have something to work with */
if ( (NULL == svrHdl) || (NULL == thisObject)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dupObjectList = dupObject->dups; /* Points to First mediaObject */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dupObject = (mediaObject *)thisObject; /* kinda cheating here,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            dupObject = (mediaObject *) dupObjectList->media_obj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for (curr_dup=1;curr_dup<dup_number; curr_dup++)</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              struct mediaObjectList
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mediaObject
                                     dupObject = (mediaObject *)thisObject; /* kinda cheating here,
                                                                                                                     struct mediaObjectList
                                                                                                                                                  mediaObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             return dupObject->mtype_token;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      short curr_dup=0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   return dupObject->mtype;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       dupObject = (mediaObject *) dupObjectList->media_obj;
                                                                                                short curr_dup=0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* get to specified Object, but already at first one */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /* get to specified Object, but already at first one */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   return NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           return NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (curr_dup=1;curr_dup<dup_number; curr_dup++)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               dupObjectList = dupObjectList->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dupObjectList = dupObjectList->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* EDMRST_GetDuplicateTypeDescrip */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (dup_number >dupObject->num_dups)
(NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (MEDIA_OBJECT != (dupObject->restoreObjType)))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
(MEDIA_OBJECT != (dupObject->restoreObjType)))
                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRST_GeDuplicatetTypeToken */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *dupObject;
                                                                                                                                                      *dupObject;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRST_GetDuplicateTypeDescrip
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *dupObjectList;
                                                                                                                          *dupObjectList;
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                                                                                                                                                                                                                                  int dup_number,
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                                                                                                                                                                                                                                                                   svrHdl,
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                  Fri Jan 04 14:40:00 2008
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                                                                                                                                                                                                                                                                                                                                                                    mediaObject *qupon,
struct mediaObjectList
short curr_dup=0;
                                                                                                                     if ( (NULL == svrHdl) || (NULL == thisObject)
                                                                                                                                                                                                            dupObjectList = dupObject->dups; /* Points to First mediaObject */
                                                                                                                                                                                                                                                                                                                        dupObject = (mediaObject *)thisObject; /* kinda cheating here,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fri Jan 04 14:40:00 2008
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for (curr_dup=1;curr_dup<dup_number; curr_dup++)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* get to specified Object, but already at first one */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /* Make sure we have something to work with if ( (NULL == svrHdl) | | (NULL == thisObject)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               dupObjectList = dupObject->dups; /* Points to First mediaObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         }
else
{
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             else if (!(dupObject->offsite))
{
                                                                                                                                                  Make sure we have something to work with */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        if (dupObject->online)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Make sure we have something to work with */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      dupObjectList = dupObjectList->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* EDMRST_GetDuplicateStatus */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     return Media_Offsite;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   return Media_Online;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         return Media_Offline;
                                                                                               (dup_number >dupObject->num_dups
                                  (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
(MEDIA_OBJECT != (dupObject->restoreObjType)))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       * offline & onsite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            return Media_Offline;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   * offsite & offline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (dup_number >dupObject->num_dups)
(NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
(MEDIA_OBJECT != (dupObject->restoreObjType)))
                                                                                                                                                                                                                                                                                                                                                                                                                                      *dupObject;
                                                                                                                                                                                                                                                                                                                                                                                                           *dupObjectList;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    int dup_number,
mediaObjectPtr thisObject )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EDMRST_GetDuplicateStatus
         RSTmedia.c 13
                                                                                                                                                                                                                                                                                               * this is the original, but
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             * this is the original, but

* the variable becomes the

* duplicate further down */

rs to First mediaObject */
                                                                                                                                                                                                                                          duplicate further down */
                                                                                                                                                                                                                                                                     the variable becomes the
Page 149 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page 149 of 172
    Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              return dupObject->physical_loc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    dupObject = (mediaObject *) dupObjectList->media_obj;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* get to specified Object, but already at first one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           return NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (curr_dup=1;curr_dup<dup_number; curr_dup++)</pre>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     dupObjectList = dupObjectList->next;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* EDMRST_GetDuplicateLocation */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EDMRST_GetDuplicateLocation
    RSTmedia.c 14
    Page 150 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 150 of 172
```

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```
#ifndef lint
static char RCS_id [] = "$RCSfile$ "
                                                                  #define NULL_STRING "\0"
                                                                                         #define
                                                                                                                                                                                                                                                                                                                                        #endif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     * * * * * * * * * * *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /* The following provides an RCS id in the binary that can be located ** with the what(1) utility. The intent is to keep this short.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ** Compile-Time Options:
** This sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 * * *
* System headers
                                                                                                                                                    * Remove for non-POSIX, non-portable code.
                                                                                                                                                                                                                            * Standard
                                                                                                                                                                         * The following is required for code that uses POSIX API's.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 * *
* *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          * * *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ** Copyright (c) 1998,1999 by EMC Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ** File Name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Feature test switches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The following functions comprise restoral management:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Purpose:
                                                                                       _POSIX_SOURCE 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDMRST_Submit
EDMRST_GetSubmitResults
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDMRST_GetQuestion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRST_GetRestoreFeedback
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EDMRST_Start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EDMRST_SetUserAnswer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  - starting the restoral of a submit object.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The intent of the contents of this file is to implement the functions the control execution of the restore for the Restore API.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polling of the status of an ongoing restore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        creation of submit objects, which define the set of objects to be restored and the scripts to be run before and after restoration,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 These functions are provided to allow:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        supply of user responses to pre- and post- restore script queries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    interrupt the restore, and to receive information necessary to query the user for input needed for the pre-restore or post-restore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               scripts, suspending, restarting,
                                                                                                                                                                                                                    defines required to turn on OS features go here.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This section must list any compile time definitions which will affect this header.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RSTstart.c
                                                                                                                                                                                                                                                                                                                                                                           "$Revision$ "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     including the ability to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *
```

```
/*
* Local function prototypes
                                                                                                                                                                                                                                                                                        /*
* #defines, structures, typedefs local to this source file
                                                                                                                                                                                                                                                                                                                                                                                                  #include <RSTsup_csm.h>
                                                                                                                                                                                                                                                                                                                                                                                                                      #include <RSTinterns.h>
                                                                                                         * External declarations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #include <ebreport/ebvl.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #include
                                                                                                                                                                                                  * Command flags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #include
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #include <ebutil/eb_normalize.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #include
                                                                                                                                                                                                                                                                                                                                                                                                                                                      * Local headers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   * Epoch headers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <ebutil/ebutil.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <eb/rb_log.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <eb/eb_port.h>
```

```
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                                                                                                                                                                                                                                                                                                                                                                                                                          * Restoral Management Functions:
                                                                                                                                                                                                                                                                                                       These functions are provided to allow:
                                                                                                                                                               restored and the scripts to be run before and after restoration, starting the restoral of a submit object polling of the status of an ongoing restore,
supply of user responses to pre- and post- restore script queries
                                                                                                                                                                                                                                                                creation of submit objects, which define the set of objects to be
                                      scripts, suspending, restarting,
                                                                      query the user for input needed for the pre-restore or post-restore
                                                                                                    interrupt the restore, and to receive information necessary to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDMRST_Submit
                                                                                                                                          including the ability to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page 156 of 172
                                                                                                                                                                                                                                            rpc_args.inPlace = inPlace;
rpc_args.transport = transport;
                                                                                                                                                if (NULL != submitArgs)
                                                                                                                                                                                                           rpc_args.submitObjectID = submitObjID;
                                                                                                                                                                                                                                                                                                             rpc_args.overwritePolicy = policy;
                                                                         rpc_args.mapFile_env = esl_strdup(submitArgs->mapfile_env);
                                                                                                                                                                                                                                                                                                                                                                                   return( EP_RB_RECOVER_BAD_ARGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDMRST_Submit
                                                                                                                                                                                                                                                                                                                                                                                         <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fri Jan 04 14:40:00 2008
```

```
currently marked restorable objects. Its completion is tested for with
                                                                                                                                                                                                                                                                                                                                                                                      Submit
                           directory
                                                                                                     policy
                                                                                                                                                           svrHdl
                                                                                                                                                                                                             Parameters:
                                                                                                                                                                                                                                                            EDMRST_Start to begin execution of the restore.
                                                                                                                                                                                                                                                                                                                                  This function starts the creation or update of a submit object from the
                                                   hostName
                                                                                                                                                                                                                                                                                        EDMRST_GetSubmitResults. The returned submit object ID is passed to
                                                                               inPlace
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EDMRST_GetRestoreFeedback
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EDMRST_Start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_SetRecxDirectives
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRST_SetUserAnswer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EDMRST_GetSubmitResults
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_Submit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EDMRST_GetQuestion
                                               (i)
                                                                                                                                                         (I) -
                    directory to restore to (only if inPlace == False)
Indicator of transport the restoral is to be over (SCSI
                                                      host to restore to (only if inPlace == False)
                                                                                                                                                         A pointer to this user's client handle for
                                                                            Flag if the restoral is to be in original locations
                                                                                                          The overwrite policy to use
                                                                                                                                the Restore Engine (server) connection
```

The following functions comprise restoral management:

```
eerrno_ty EDMRST_Submit ( serverHandle
                                                                                                                                                                                                                                                                                                                                                                         the restore
                                                                                                                                                                                                                                                                                                                                                                                                           clientSocketPort (I) - the port to connect to on the client machine for
                                                                                                          char
                                                                                                                            eerrno_ty
                                                                                                                                                RE_submit_args
                                                                                                                                                                 RE_status_result
                                            if ( svrHdl == NULL
                                                                /* validate args first: */
(NULL == handlePtr) | (svrHdl != handlePtr->re_binding_handle) (!inPlace && (hostName == NULL | directory == NULL) )
                                                                                                                                                                                                                                                                                                                                                                                                                                a client initiated restore
                                                                                                                                                                                                                                                  const RestoreTransport transport
                                                                                                                                                                                                                                                                     const
                                                                                                                                                                                                                                                                                         const
                                                                                                                                                                                                                            unsigned int
                                                                                                                                                                                                                                                                                                            const
                                                                                                                                                                                                                                                                                                                                const char
                                                                                                                                                                                                            EDMRST_submit_args
                                                                                                                                                                                                                                                                       char
                                                                                                                                                                                                                                                                                         boolean_ty
                                                                                                                                                                                                                                                                                                            OverwritePolicy
                                                                                                                            result;
                                                                                                                                                rpc_args;
                                                                                                       *nullstr = "";
                                                                                                                                                                   *rpc_result;
                                                                                                                                                                                                                                                                                                           policy,
                                                                                                                                                                                                                              submitObjID,
                                                                                                                                                                                                                                                                   *directory,
                                                                                                                                                                                                                                                                                     inPlace,
                                                                                                                                                                                                                                                                                                                                *hostName,
                                                                                                                                                                                                                                                                                                                                                   svrHdl,
                                                                                                                                                                                                            *submitArgs)
```

socketClientNm (I) -

ID of an existing submit object which is to be added to - Name of the client the restore is going to on

transport submitObjID

or network)

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RSTstart.c3

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GetSubmitResults

RSTstart.c 4

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```
else
                                                                                                                                                                                                                                                                                                                                          rpc_result = re_submit_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           else
return( result );
                                                                                                                                                                                                                                                                                          if (!rpc_result) {
                                                                                                                                                                                                                                                                                                                                                                                               set_rpc_obj( re_submit, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ) else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                if (!inPlace) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if (NULL != submitArgs)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   if (NULL != submitArgs)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rpc_args.socketClientName=nullstr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  if (NULL==(rpc_args.socketClientName=esl_strdup(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpc_args.socketPort =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpc_args.mapFile_env =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpc_args.socketPort=submitArgs->clientSocketPort;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpc_args.socketClientName=nullstr ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpc_args.directory = (char *)directory;
                                                  xdr_free( xdr_RE_status_result, (char *)rpc_result );
                                                                                                                                 result = rpc_result->status;
                                                                                                                                                                                                                                    rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpc_args.hostname = (char *)hostName;
                                                                                                                                                                                                                                                                result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rpc_args.directory = nullstr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpc_args.hostname = nullstr;
                                                                            /st release RPC result struct: contents and struct st/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nullstr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                submitArgs->socketClientNm()()
```

```
eerrno_ty EDMRST_GetSubmitResults( serverHandle
                                                                                                                                                                      This function begins execution of the restoral of the objects in a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ************************
                                                                                                                                                submit object.
                                                                                                                                                                                                                                             Start
                                                               Parameters:
                                                                                                                    received via EDMRST_GetRestoreFeedback.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   objectsDone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  submitObjID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    option of cancelling the submit.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This function tests for completion of an EDMRST_Submit call, with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                else
{
                                                                                                                                                                                                                                                                                                                                                        return( result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (!rpc_result) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpc_result = re_get_submit_results_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      set_rpc_obj( re_get_submit_results, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RE_get_submit_results_output RE_get_submit_results_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpc_args.interrupt = interrupt;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (svrHdl == NULL | | submitObjID == NULL | | objectsDone ==
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                   xdr_free (xdr_RE_get_submit_results_output,
(I) - A pointer to this user's client handle for
                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *objectsDone = rpc_result-> objectsDone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               result = rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the Restore Engine (server) connection. (I) - Flag if the submit is to be canceled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (I) - A pointer to this user's client handle for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                             Its progress and requests for operator input are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (result == E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ID of the submit object which describes the restore number of objects -- total number in the submit object
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             if operation is complete,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           submit operation is still executing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         *submitObjID = rpc_result->submitObjectID;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unsigned long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unsigned int
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             const boolean_ty interrupt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or number processed so far if
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   *objectsDone )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *submitObjID,
                                                                                                                                                                                                                                                                                                                                                                                                     char *)rpc_result);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INCOMPLETE status)
```

```
eerrno_ty EDMRST_Start ( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 submitObjID
return( result );
/* EDMRST_Start */
                                                                                                                                                                                                                             else
                                                                                                                                                                                                                                                                                                                                            if (!rpc_result) {
                                                                                                                                                                                                                                                                                                                                                                                                rpc_result = re_start_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                           set_rpc_obj( re_start, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rpc_args.submitObjectID = submitObjID;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if (svrHdl == NULL | | submitObjID == 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RE_start_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
                                                                                   xdr_free( xdr_RE_status_result, (char *)rpc_result );
                                                                                                                                                                       result = rpc_result->status;
                                                                                                                                                                                                                                                                                   result = EP_RB_RECOVER_RPC_FAIL;
rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                 /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (I) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the Restore Engine (server) connection.

ID of the submit object that describes the restore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unsigned int submitObjID )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDMRST_Start
```

RSTstart.c6

```
eerrno_ty EDMRST_GetRestoreFeedback( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 159 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              necessary to query the user for input needed for the pre-restore or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   quitRestore
currentState
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      post-restore scripts.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            includes the ability to interrupt the restore, and to receive information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This function is used to poll for the status of an ongoing restore, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GetRestoreFeedback
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        feedbackPtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             set_rpc_obj( re_get_restore_feedback, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if (!rpc_result) {
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc_args.quit_restore = quitRestore;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FreeFeedbackObjectContents( foPtr );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       feedbackObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RE_get_restore_feedback_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE_get_restore_feedback_result *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (svrHdl == NULL || currentState == NULL || feedbackPtr == NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEEDBACK_OBJECT != foPtr->restoreObjType
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (OI)
                                                                                                                                                                                    rpc_result->notify = NULL;
                                                                                                                                                                                                                  foPtr->notify = rpc_result->notify;
                                                                                                                                                                                                                                             rpc_result->rstStats.edm.next = NULL;
                                                                                                                                                                                                                                                                                                            memcpy( &foPtr->stats.edm, &rpc_result->rstStats.edm,
                                                                                                                                                                                                                                                                                                                                                                      rpc_result->rstStats.wiprogress = NULL;
                                                         xdr_free( xdr_RE_get_restore_feedback_result,
                                                                                                                                                                                                                                                                                                                                                                                                    foPtr->stats.wiprogress = rpc_result->rstStats.wiprogress;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                result = rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rec_api_log_csm( SUB_CSM_RPC_FAIL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       return ( EP_RB_RECOVER_BAD_ARGS );
                                                                                       /* release RPC result struct: contents and struct */
                                                                                                                                                      *currentState = rpc_result->rstStats.edm.status;
                                                                                                                                                                                                                                                                                                                                                                                                                                  foPtr->stats.status = rpc_result->rstStats.status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (I) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (I) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 re_get_restore_feedback_1( &rpc_args,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Flag if the restoral is to be stopped
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pointer to structure to receive restore feedback data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pointer to storage to receive the state of the restore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A pointer to this user's client handle for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *foPtr = (feedbackObject *)feedbackPtr;
                                                                                                                                                                                                                                                                              sizeof (struct EDMProgress) );
                           (char *)rpc_result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RERunningState
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   const boolean_ty quitRestore,
RERunningState *currentState,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                feedbackObjectPtr feedbackPtr )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpc_args;
                                                                                                                                                                                    /* avoid 2 frees */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     svrHd1
                                                                                                                                                                                                                                                   /* for xdr_free
                                                                                                                                                                                                                                                                                                                                          /* avoid 2 frees */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         svrHdl );
                                                                                                                                                                                                                                                   *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    eerrno_ty EDMRST_SetUserAnswer( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This function is used to return user input requested via the queryObjectPtr parameter output of the EDMRST_GetQuestion function call.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  more
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                answer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           queryPtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SetUserAnswer
                                                                                                                           else
                                                                                                                                                                                                                                                                                 answerObj->nextanswer = NULL;
                                                                                                                                                                                                                                                                                                          answerObj->qnum = queryObj->query->qnum;
                                                                                                                                                                                 if (NULL == (tmpAnswer = queryObj->answers->firstanswer))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     if (NULL == (answerObj->ctext = esl_strdup( answer )))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    μ÷
                                                                                                                                                                                                                  ++queryObj->answers->numanswers;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* allocate answer list if none in queryObject yet: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   queryObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Answer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RE_set_user_answer_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /* EDMRST_GetRestoreFeedback */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  allocate and initialize answer object */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (NULL == (answerObj = calloc( 1, sizeof(Answer) )))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (svrHdl == NULL || answer == NULL || queryPtr == NULL
(NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (I) - Pointer to object containing the question data.(I) - pointer to text string response to question(I) - indicator that there will be more answers to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (I) - A pointer to this user's client handle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (NULL == queryObj->query)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      if (NULL == (queryObj->answers = calloc( 1, sizeof(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (QUERY_OBJECT != queryObj->restoreObjType)
                                                                                                                                                      queryObj->answers->firstanswer = answerObj;
                                                                                                                                                                                                                                                                                                                                                                        return EP_RB_RECOVER_NOMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return EP_RB_RECOVER_NOMEM;
tmpAnswer->nextanswer = answer0bj;
                                                            while (NULL != tmpAnswer->nextanswer)
                                                                                                                                                                                                                                                                                                                                                                                                       free( answerObj );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          return EP_RB_RECOVER_NOMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     return EP_RB_RECOVER_BAD_ARGS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  indicator that there will be more answers to this question
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        queryObj->answers)
                              tmpAnswer = tmpAnswer->nextanswer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         queryObjectPtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result = E_SUCCESS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *queryObj = (queryObject *)queryPtr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *answerObj,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            boolean_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                const char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *tmpAnswer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           queryPtr,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         svrHdl,
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AnswerList))))

RSTstart.c8

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                          EDMRST_SetUserAnswer
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                           Fri Jan 04 14:40:00 2008
if (!rpc_result) {
                          EDMRST_GetQuestion
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```
eerrno_ty EDMRST_GetQuestion( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               **********************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 queryPtr (0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pre-restore or post-restore script execution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This function is used to fetch the data needed to query the user during a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GetQuestion
                                                             set_rpc_obj( re_get_question, &rpc_args.RPCobjID );
                                                                                                                       FreeQueryObjectContents( query_ptr );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               queryObject
rpc_result = re_get_question_1( &rpc_args, svrHdl );
                                                                                                                                                         /* free last question in query obj */
                                                                                                                                                                                                                                                                                                         if (svrHdl == NULL | queryPtr == NULL
|| (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_get_question_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               else
                                                                                                                                                                                                                                                                                                                                                                                     /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  return( result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if (!rpc_result)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpc_result = re_set_user_answer_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          set_rpc_obj( re_set_user_answer, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           queryObj->answers->firstanswer = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpc_args.answers.firstanswer = queryObj->answers->firstanswer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpc_args.answers.numanswers = queryObj->answers->numanswers;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /* prepare arg structures: move answer list to rpc structure */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               if (more)
                                                                                                                                                                                                                                                                              (QUERY_OBJECT != query_ptr->restoreObjType )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (I) - A pointer to this user's client handle for
                                                                                                                                                                                                                   return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        xdr_free( xdr_RE_status_result, (char *)rpc_result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               result = rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pointer to the object containing the question data.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         return result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        queryObjectPtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            *query_ptr =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (queryObject *)queryPtr;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        queryPtr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           char
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RSTstart.c9

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   eerrno_ty EDMRST_SetRecxDirectives ( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SetRecxDirectives:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Restore Engine (server) connection.

template (O) - The name of the local recx file
alternate (O) - the name of this host so the file can be tranfered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This routine returns sends the Filename and path plus hostname of the recx directives file, which was created by the command eb_dc_restore, to the server which then processes the recx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               directives
                                if ((NULL==rpc_result) || (rpc_result->status != E_SUCCESS)) {
    result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                 rpc_result = re_load_recx_directives_1( &rpc_args, svrHdl );
                                                                                                                                                                          set_rpc_obj( re_load_recx_directives, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                           rpc_args.fileinfo = fileinfo;
                                                                                                                                                                                                                                                                                    fileinfo.hostname = esl_strdup(hostname);
                                                                                                                                                                                                       /*no object ID in file info structure*/
                                                                                                                                                                                                                                                                                                                  fileinfo.filename = esl_strdup(filename);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          if (svrHdl == NULL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_null_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RSTRPC_recx_file_info
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RE_recx_file_info
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RE_status_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    return( result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* EDMRST_GetQuestion */
                                                                                                                                                                                                                                                                                                                                                                                                 || (hostname == NULL || filename == NULL || 0==strcmp(filename,"")) )
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (NULL == handlePtr) || (svrHdl != handlePtr->re_binding_handle)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (I) -
                                                                                                                                                                                                                                                                                                                                                                          return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   xdr_free( xdr_RE_get_question_result, (char *)rpc_result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpc_result->query = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           query_ptr->query = rpc_result->query;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /* release RPC result struct: contents and struct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      result = rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             count;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *nullstr = "";
*poll_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fileinfo;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             char
RSTstart.c 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /* avoid 2 frees */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      svrHdl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *hostname
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *filename,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* use returned obj
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
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EDMRST_getCatalogInfo( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Page 163 of 172
                                                                                                                                                                                                                                                      Return Codes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDMRST_get_catalog_info:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *level
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            backup_time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         level for backup being restored
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This routine returns sends the fills the level string with the
                                                                                                                                                                                                \it EP\_RB\_RECOVER\_BAD\_ARGS - arguments passed in are null \it E\_SUCCESS - the fields have been filled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          return( result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*polling info stuf*/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    set_rpc_obj(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (poll_result->status != E_SUCCESS)
result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   until it finishes, or it is longer than 60 seconds.*/
while((poll_result->status == EP_RB_RECOVER_RPC_INCOMPLETE)&&(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         poll_result = re_poll_load_recx_directives_1(&args, svrHdl);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      xdr_free( xdr_RE_status_result, (char *)rpc_result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   count = 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /* check to see if the RPC is still running
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* release RPC result struct: contents and struct */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /* Initialize the count and poll_result*/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  result = rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Restore Engine (server) connection.

(I) - Time of the backup that is beeing looked at (0) - The level of the backup for
                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (I) - A pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           count++;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sleep(1);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       poll_result =
                                                                                                                                                                                                                                                                                                      - The type of catalog for the specified bacup taken from catalog structure. If not enough
                                                                                                                                                                                                                                                                                                                                                                                       memory has been allocated value will be "\backslash 0" - The number of records for the specified backup taken from catalog structure. If not enough
                                                                                                                                                                                                                                                                                                                                                               memory has been allocated value will be "\0"
                                   time_t
                                                                                                                                                                                                                                                                            memory has been allocated value will be "\0"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     - The level of the backup for specified time taken from catalog structure. If not enough
                                                                                                                                                                                                                                                                                                    taken from catalog structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRST_SetRecxDirectives
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         re_poll_load_recx_directives, &rpc_args.RPCobjID );
                                                                                                                                                                                             the fields have been filled in
                                                                                                                                                                   and RPC succeeded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    re_poll_load_recx_directives_1(
                                                             SVrHdl
                              backup_time,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fri Jan 04 14:40:00 2008 Page 164 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               &args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             count <=60))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       catType=strcpy(catType,rpc_result->catType);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   numrec=strcpy(numrec,rpc_result->numrec);
/*copy the structures catType field to the catType variable*/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*copy the structures level field to the level variable*/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*copy the structures numrec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     return( E_SUCCESS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tmp = rpc_result->level[0];
sprintf(level, "%d",tmp);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if (rpc_result == NULL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpc_result = re_get_catalog_info_1( &rpc_args, svrHdl );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            set_rpc_obj( re_get_catalog_info, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc_args.backupTime=backup_time;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               int
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_catalog_info RE_time
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* Prepare input argument structure for RPC: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   return(EP_RB_RECOVER_RPC_FAIL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     return(EP_RB_RECOVER_BAD_ARGS);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     char
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EDMRST_getCatalogInfo
RSTstart.c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (NULL==svrHdl ) || (NULL==level)
|| (NULL==catType))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tmp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *result = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 field to the numrec variable*/
    12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *catType)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *numrec,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     *level,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fri Jan 04 14:40:00 2008
```

```
/*
* System headers.
                                                                                                                             #include <grp.h>
#include <pwd.h>
#include <search.h>
#include <eb/rb_log.h>
                    #include <eb/eb_port.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                 #define
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #endif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        static char RCS_id [] = "$RCSfile$ "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #ifndef lint
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /* The following provides an RCS id in the binary that can be located ** with the what(1) utility. The intent is to keep this short.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          * Epoch headers.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ** Compile-Time Options:

** This sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        *
                                                                                                                                                                                                                                                                                                       * The following is required for code that uses POSIX API's.
* Remove for non-POSIX, non-portable code.
                                                                                                                                                                                                                                                                                                                                                    * Feature test switches.
* Standard defines required to turn on OS features go here.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ** Copyright (c) 1998,1999 by EMC Corporation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Table of Contents:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Purpose:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     File Name:
                                                                                                                                                                                                                                                                                                                                                                                                                                               _POSIX_SOURCE 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Restore API Functions:

EDMRST_FindRestorableObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Internal Functions:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the old xebrecover find GUI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Implementation for EDMRST_FindRestorableObjects, which is the recover "find" command. What is supported in find is what was supported in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This section must list any compile time definitions which will affect this header.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RSTfind.c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EDMRST_GetFindResults
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "$Revision$ "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "$Date$" ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 165 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*
* External declarations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         #include <RSTinterns.h>
#include <RSTsup_csm.h>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /*
*#defines, structures, typedefs local to this source file
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*
* Local headers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 166 of 172
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RSTfind.c 1

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eerrno_ty EDMRST_FindRestorableObjects( serverHandle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Return:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Find Routine:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDMRST_FindRestorableObjects Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cancel the find, and receive the results
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This operation is performed asynchronously by the Restore Engine, and the first API function, {\it EDMRST\_FindRestorableObjects}, is used to start the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           was backed up at the nth time.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        with the objects.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    is an array of found objects and an array of backup times associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        These routines allow the user to find restorable objects.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          searchCriteria (I) - The criteria used for the search
                                      criteria.sizeInBytes.low = searchCriteria->sizeInBytes.low;
                                                                               criteria.sizeInBytes.high = searchCriteria->sizeInBytes.high;
                                                                                                                      criteria.excludeGroup = searchCriteria->excludeGroup;
                                                                                                                                                            criteria.group = searchCriteria->group;
                                                                                                                                                                                                  criteria.excludeOwner = searchCriteria->excludeOwner;
                                                                                                                                                                                                                                               criteria.owner = searchCriteria->owner;
                                                                                                                                                                                                                                                                               criteria.typeOfFile = searchCriteria->typeOfFile;
                                                                                                                                                                                                                                                                                                                     criteria.excludeString = searchCriteria->excludeString;
                                                                                                                                                                                                                                                                                                                                                               criteria.searchString = searchCriteria->searchString;
                                                                                                                                                                                                                                                                                                                                                                                                                                           criteria.startDirectory = searchCriteria->startDirectory;
criteria.sizeMatch = searchCriteria->sizeMatch;
                                                                                                                                                                                                                                                                                                                                                                                                        criteria.descendDirectory = searchCriteria->descendDirectory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpc_args.searchCriteria = &criteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rbe_log_debug_sub( 0, "EDMRST_FindRestorableObjects called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /st load criteria structure for RPC -- we dont dupe strings since they
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* Prepare input argument structure for RPC: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RE_search_criteria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RE_find_restorable_objects_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RE_find_restorable_objects_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EP_RB_RECOVER_FATALERR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EP_RB_RECOVER_FIND_INTERRUPTED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EP_RB_RECOVER_BAD_ARGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EP_RB_RECOVER_FIND_FAILED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP_EB_RECOVER_FIND_BAD_GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EP_EB_RECOVER_FIND_BAD_USER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E\_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                || NULL == searchCriteria->startDirectory)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  will only be used temporarily by the rpc call */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (NULL == searchCriteria | | NULL == svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EDMRST_GetFindResults is used to test for completion of the find,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (I) - A pointer to this user's client handle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     These arrays are 1-to-1. That is, the nth Object
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EBREC_SearchCriteriaRec *searchCriteria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             result = E_SUCCESS ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                parts of, at least) if it is done.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          criteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *rpc_result;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Returned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for the
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RSTfind.c 4

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Fri Jan 04 14:40:00 2008
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Return:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRST_GetFindResults is used to test for completion of the find, and receive the results (parts of, at least) if it is done.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GetFindResults
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cookie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           numberEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         maxEntries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  svrHdl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          foundObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        interrupt
                                                                                                                                     rpc_result = re_get_find_results_1( &rpc_args, svrHdl );
                                                                                                                                                                                set_rpc_obj( re_get_find_results, &rpc_args.RPCobjID );
                                                                                                                                                                                                                                                                                                                          rpc_args.interrupt = interrupt;
                                                                                                                                                                                                                                                                                                                                                                         rpc_args.cookie = *cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                    rpc_args.maxEntries = maxEntries;
                                                                                                                                                                                                                                       /* call RPC,
                                                                                              if (!rpc_result)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for ( foundArray=(restorableObject **)foundObjects, index=0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         if (NULL == foundObjects
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rbe_log_debug_sub( 0, "EDMRST_GetFindResults called" );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     restorableObject
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               eerrno_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RSTRPC_found_obj_list
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /* validate target restorableObjects:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE_get_find_results_args
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RE_get_find_results_result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /* validate args first: */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EP_RB_RECOVER_BAD_ARGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EP_RB_RECOVER_BAD_COOKIE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E_SUCCESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              || NULL == times |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              index++, foundArray++ )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         index<maxEntries;
                                               result = EP_RB_RECOVER_RPC_FAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    if ( NULL == *foundArray
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      return( EP_RB_RECOVER_BAD_ARGS );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JL == times | NULL == cookie | material mat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (0)
(0)
(1)
(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (I)
                                                                                                                                                                                                                                   get response */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NULL != (*foundArray)->rpcObjPtr )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESTORABLE_OBJECT != (*foundArray)->restoreObjType

    a place holder for the list position

    a pre-allocated array to return the backup times in

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the real number of objects returned in the array
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a pre-allocated array to return the objects in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the maximum number of found objects to return
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        requests cancellation of the find (if TRUE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Restore Engine (server) connection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a pointer to this user's client handle for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     restorableObjectPtr *foundObjects,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        const long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                boolean_ty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          || NULL == svrHdl || NULL == numberEntries
|L == cookie || maxEntries <= 0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRST_GetFindResults
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           result = E_SUCCESS ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     **foundArray;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    index;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *temp_list;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpc_args;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 *rpc_result = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  *times,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        maxEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           svrHd1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       *numberEntries,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    interrupt,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *cookie )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page 169 of 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fri Jan 04 14:40:00 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              j.
É
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              return( result );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /* release RPC result struct's contents :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /* move results to caller's area, if successful: */
if (result == E_SUCCESS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      else
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (rpc_result)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EDMRST_GetFindResults
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           xdr_free( xdr_RE_get_find_results_result, (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              if (rpc_result->numEntries)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* needed to end with NULL in each RSTRPC_found_obj_list
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  while ( rpc_result->numEntries )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              foundArray = (restorableObject **)foundObjects;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         temp_list = rpc_result->foundObjs;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *numberEntries = rpc_result->numEntries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          *cookie = rpc_result->cookie;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               result = rpc_result->status;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rec_api_log_csm( SUB_CSM_RPC_FAIL, NULL);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry
because returned user rest. objects can't be freed yet */
temp_list = temp list >>>>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpc_result->numEntries--;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (RSTRPC_restorable_obj_root *)temp_list->foundObj;
times[index++] = temp_list->time;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       result = EP_RB_RECOVER_SERVERFAIL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 temp_list->foundObj = NULL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          foundArray[index] ->rpcObjPtr =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        if ( !temp_list || !rpc_args.maxEntries-- )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 break;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDMRST_GetFindResults
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /* null pointer or too many returned */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /* break'ed before done */
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   char *)rpc_result );
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